Skuse's complete confectioner : a practical guide to the art of sugar boiling in all its branches / [E. Skuse].

Contributors

Skuse, E.

Publication/Creation

London : W.J. Bush, [1890?]

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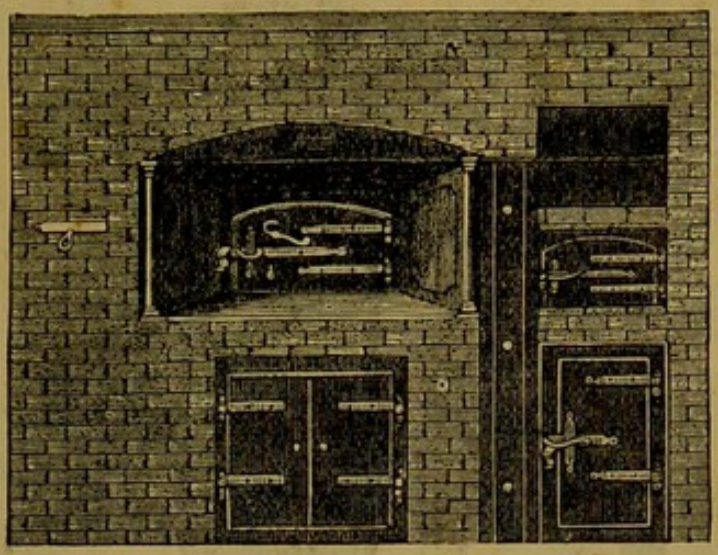

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PREFACE.

In presenting this work to the public, I should be wanting in respect did I not first express my sincere gratitude for the kindness, indulgence, and appreciation my former efforts in this direction has always been received. I had thought I had finished posing as an author and authority, *sic* on the subject of sweety-making when I had launched four editions of the "Confectioner's Hand Book" (eight thousand copies) in the market. However, they have all been out of print for some time, and your humble servant has been persuaded by the present publishers to write another book on the same lines.

I am not a journalist, and writing is by no means my strong point, so I started on the job with about the same feeling as a child does to take physic.

I have tried, as I have always done, to write so that people who know the English language could not only understand, but fully follow the details to the minutest points, and give the novice a clear conception of the practical manipulation of the ingredients to make the different sorts indicated. Technicalities I have avoided as much as possible; at the same time, I have endeavoured to be of service to the experienced. In nearly every department of which I treat, I have had practical experience as a workman. The exceptions I give are of the experienced workmen, after satisfying myself with the genuiness of the information, I leave the contents to the experienced reader to justify my remarks. To the inexperienced, I have only to add that patience and dogged perseverance will, and must succeed. Practice is only to be had by experiment, and little failures are only to be overcome by another try. The instructions are simple and genuine, and must lead, if faithfully carried out, to success. My experience in making, and little difficulties I have noted through the pages, and methods I have found, from which I have found the best results I have mentioned. But there is no absolute *this and that* in the trade. New mixings, new methods, new processes, new goods, and new appliances are continually introduced. After the rudiments have been thoroughly mastered, the reader, if he has an inventive brain, has ample scope to distinguish himseif in the toffee world.

Again I express my obligations to my patrons, and hope they will look upon this work, not as a literary effort, but as from a workman to a workman, or a *would-be* workman.

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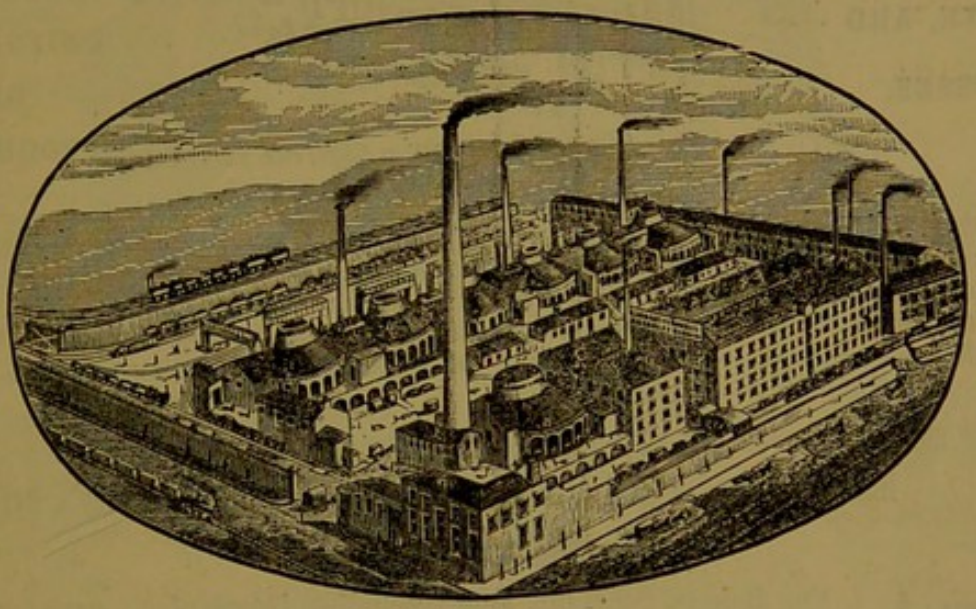

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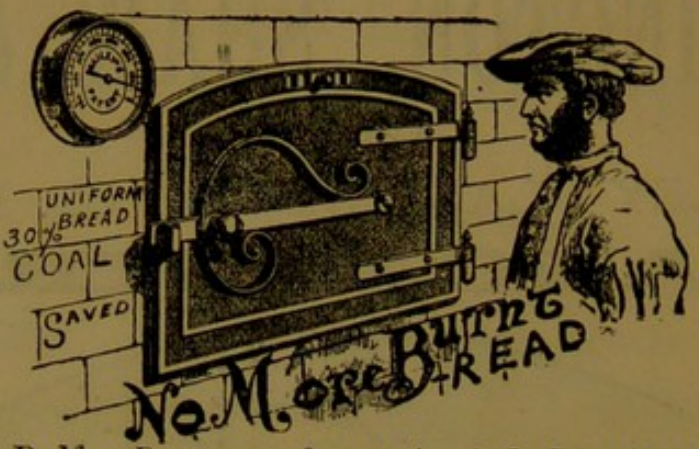

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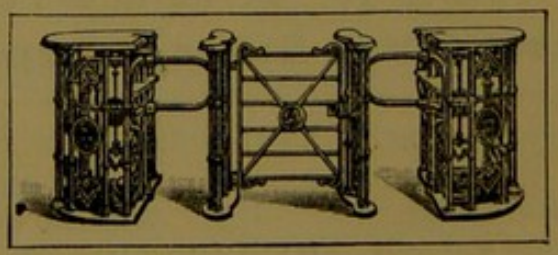

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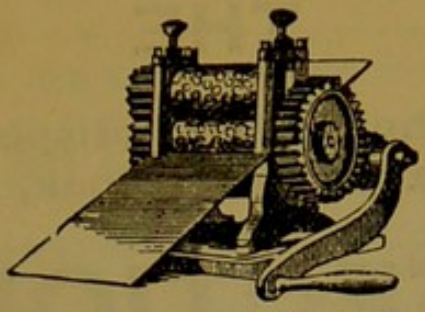

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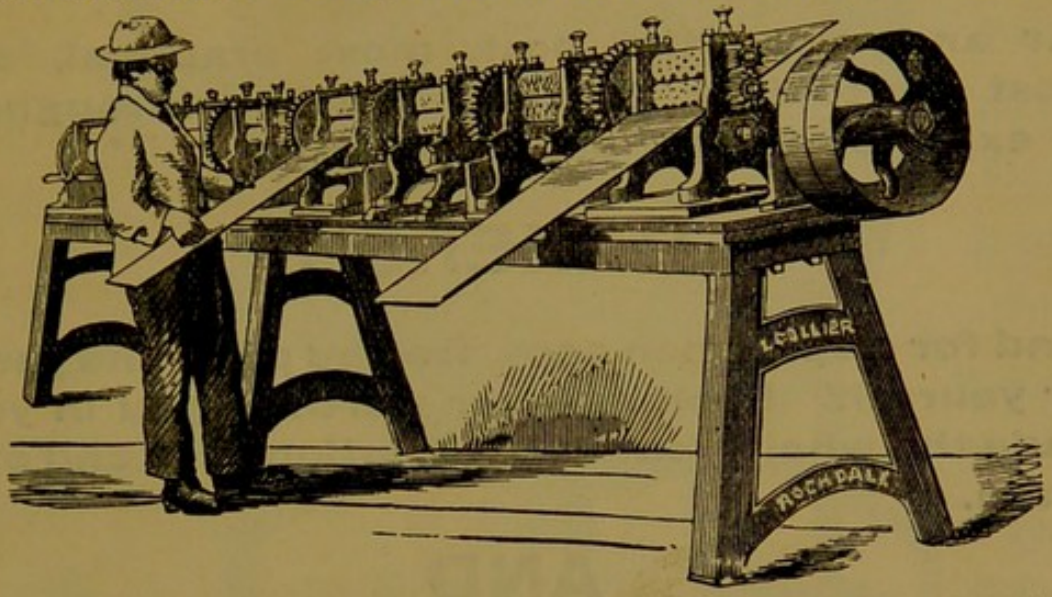

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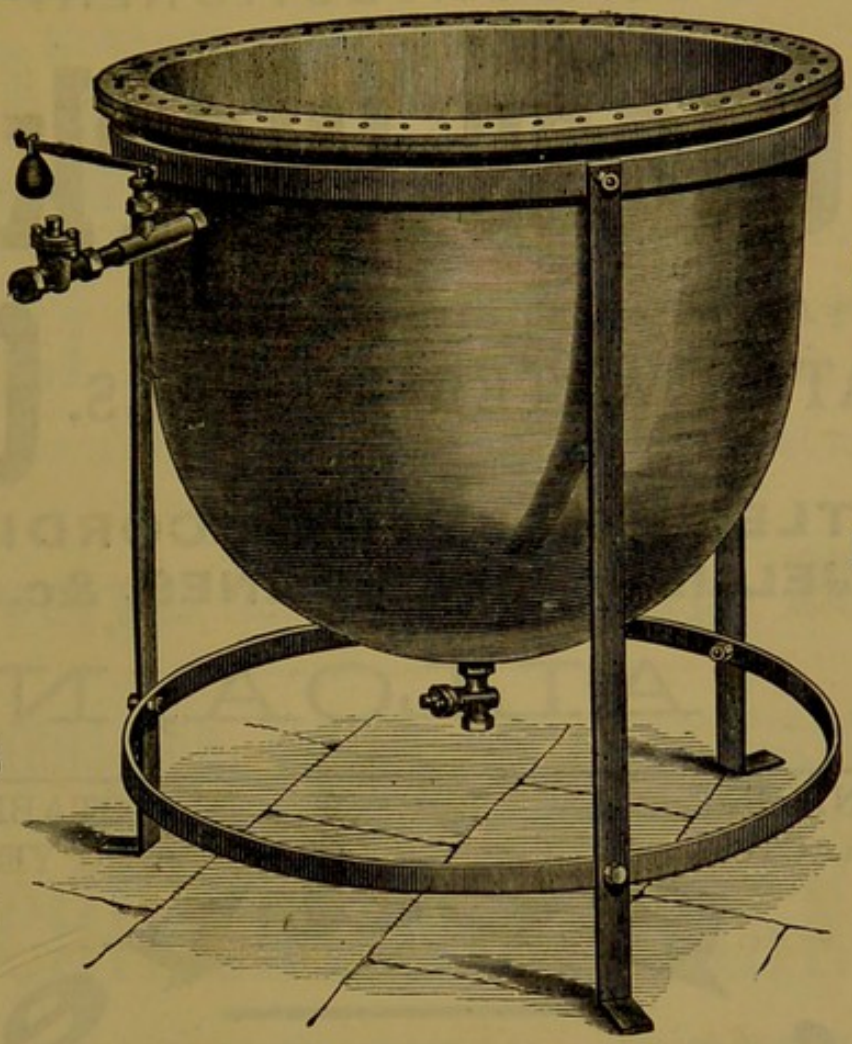

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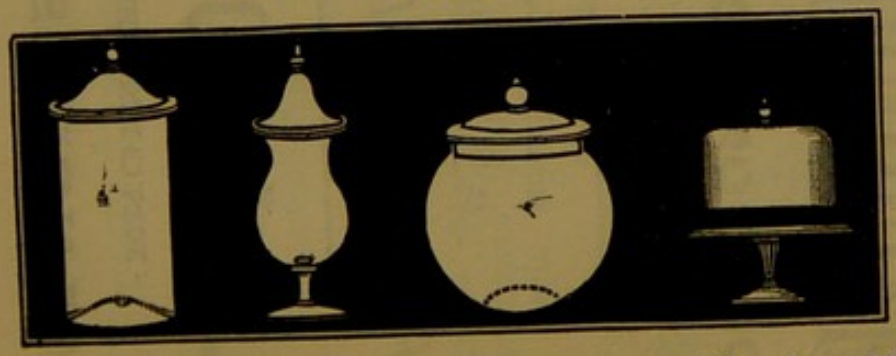

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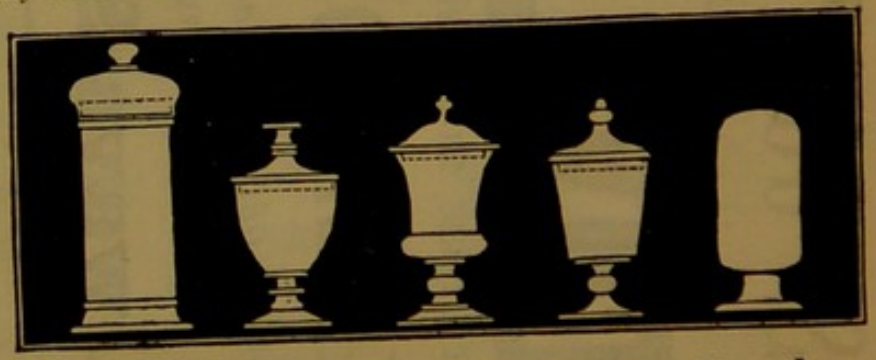

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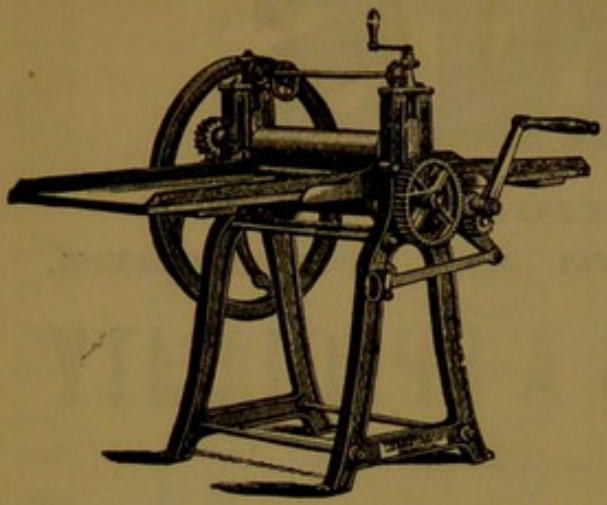

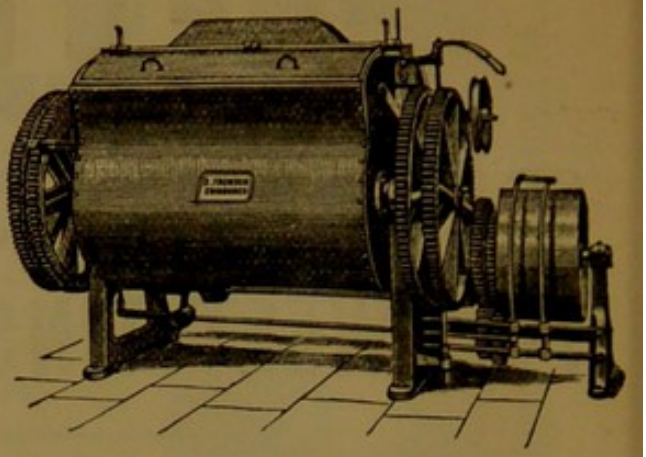

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SUGAR BOILING.

This branch of the trade or business of a confectioner is perhaps the most important. Few, if any, manufacturers are not more or less interested in it, and certainly no retail shop could be considered orthodox which did not display a tempting variety of this class. So inclusive is the term "boiled goods" that it embraces drops, rocks, candies, toffees, caramels, creams, and a number of different sorts of hand-made, machine and moulded goods. It is the most ancient method of which we have any knowledge, and perhaps the most popular process of modern times; the evidence of our every day experience convinces us that, notwithstanding the boom which heralds from time to time a new sweet, cooked in a different manner, composed of ingredients hitherto unused in the business, it is the exception when such goods hold the front rank for more than a few months, however pretty, tasty, or tempting they may be, the public palate seems to fall back on those made on the old lines which, though capable of improvement, seems not to be superceded. Of the entire make of confectionery in the United Kingdom, at least two-thirds of it may be written down under the name of boiled sugar. They are undoubtedly the chief feature with both manufacturers and retailers, embracing, as they do, endless facilities for fertile brains and deft fingers for inventing novelties in design, manipulation, combination, and finish. Notwithstanding the already great variety, there are always daily something new in this department brought into the market. Many of the most successful houses owe their popularity more to their heads than to their hands, hence the importance of

studying this branch in all its ramifications. The endless assortment requiring different methods for preparing and manipulating make it necessary to subdivide this branch into sections, order and arrangement being so necessary to be thoroughly understood. When we consider the few inexpensive tools required to make so many kinds of saleable goods, it is not to be wondered at so many retailers have a fancy to make their own toffees and such like, there is no reason why a man or a woman, with an ordinary amount of patience, a willing and energetic disposition, flavoured with a fair amount of intelligence, should not be able to become, with the aid of this book and a few pounds for tools, fairly good sugar boilers, with a few months' practice.

There are many reasons why a retail confectioner should study sugar boiling. It gives a character to the business, a fascinating odour to the premises, and a general at-homeness to the surroundings. No goods look more attractive and tempting to the sweet eating public than fresh made goods of this kind. A bright window can only be so kept by makers. Grainy or sticky drops may be reboiled; scraps and what would otherwise be almost waste (at least unsightly) may be redressed in another shape, and become, not only saleable, but profitable. There are many advantages which a maker possess over one who buys all. For instance, clear boiled goods should be kept air-tight, and are therefore delivered to the shopkeeper in bottles, jars, or tins, on which a charge is made, these have to be repacked and returned. Breakages are an important item, so is carriage—the cost of the latter is saved and the former reduced to a minimum.

The writer's former efforts to instruct the unitiated were looked upon by some in the trade as giving away the business, to the injury of those who served their time to the art.

It is not so. Whatever means are adopted to benefit the retailer and advertise the business by brighter windows, cleaner shops, less faded goods, and healthier financial conditions must contribute to the general prosperity of the trade, from the bottom step to the top rung of the ladder.

It should be the aim of all amateurs to study quality rather than price. Goods well made, carefully flavoured, and nicely packed will always command a ready sale at a fair price, giving satisfaction to the customer and credit to the maker. Give your customers something to please the eye as well as the palate, so that every sale may be looked

upon as an advertisement. Cheap, bulky, insipid stuff is unprofitable and damaging to the trade as well as the seller. I venture to assert that more would-be makers have come to grief trying to cut out each other in price for rubbishy sweets than through any other cause. Look at the hundreds of firms who have a reputation, whose very name command trade at good prices, year after year add to the turnover. What is the talisman? Look at their goods. There is, perhaps, nothing very striking in them, but they are always good alike, busy or slack they are made with care, packed with taste, and delivered neatly in a business-like fashion. Compare this to our ephemeral makers of cheap stuff; to obtain orders they sell at unprofitable prices, often at a loss, and try to make up the difference by resorting to various methods of increasing the bulk, the result is ultimate ruin to themselves, loss to their creditors, and injury to everyone concerned. Few who read these lines will not be able to verify all that is stated. The writer's advice has always been to keep up a high degree of excellence, try to improve in every direction, and success is only a matter of patience, energy, and civility. This work is written to initiate those who have a desire to know the mysteries of the confectioner's art. The instructions are plain, simple, and should be easily understood: only that which is necessary is stated; repetition of processes, which may apply to many recipes, are avoided as far as possible. We have no space to spare for long rambling descriptive details, which bewilder and confuse a beginner. Short, crisp, essential instructions are given at the commencement of every section; these should be carefully read and re-read; they apply to all the formulæ which follow, any variation is noted, but when a particular recipe is required the reader is referred to the instructions for the method of working.

Difficult processes in any branch should not be attempted until the more simple ones are mastered. Success depends, not only on genuine information, but also on the faithful working out of it.

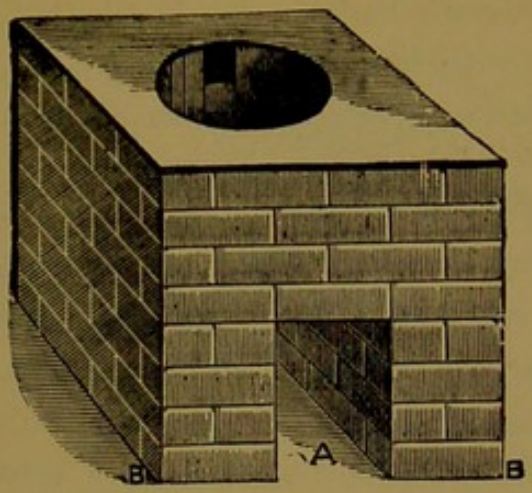
It is not pretended to give a complete list of all kinds known in the trade, that would be absurd and impossible, but all the different branches are given, consequently any article of confectionery may be imitated by careful comparison and reference to the class or section to which the sample belongs. To be able to tell this will require knowledge only to be gained by experience, so that much depends on the thoughtful endeavour of the beginner.

THE WORKSHOP.

SUGAR BOILING REQUISITES.

Sugar boiling, like every other craft, requires a place to do it, fitted with tools and appliances. The requisites and requirements can be easily suited to the accommodation and the purse of the would-be confectioner. A work to be useful for all must cater for all, and include information which will be useful to the smaller shopkeeper as well as the larger maker. To begin at the bottom, one can easily imagine a person whose only ambition is to make a little toffee and hardbake for the window fit for children. This can be done with a very small ontlay for utensils. Where circumstances compel us to be very economical, we can manage with an iron saucepan, a clean clay pipe, a few toffee tins, a pair of large scissors, and an ordinary kitchen fire. This is rather a primitive arrangement, however it will answer the purpose. The tins should be made of stout tinned iron, about 15 inches long and 8 or 10 inches wide and 1 inch deep, wired round the top for strength. Copper would be much preferable to iron for the saucepan. We can make with these appliances Everton toffee, cocoanut candy, and such like, as well as clove stick and hand cut balls at a pinch. The next tool to be added should be a small cast-iron pouring plate, say 3 feet long by 1 foot 8 inches wide, costing about £1. Fix this on a rough bench about 2 feet 4 inches high, letting the pouring plate form a top like a table. This will be very useful, and will enable us to extend our operations to sticks, striped and plain, as well as creams of various kinds. A pouring plate this size will cool 12 or 14 lbs. of sugar at a time. The next move is an important one viz., the erection of a sugar boiler's furnace, not very costly and certainly indispensable where quality and variety are required, it will be a great saving of time as well as money, the sugar will boil a much better colour, so that cheaper sugar may be used for brown or yellow goods, while one can make acid drops and other white goods from granulated, Dutch crush, or loaf sugar, which would be impossible to make on a kitchen fire from any sort of sugar. The furnace may be erected in a back kitchen, cellar, or outhouse, of ordinary size, the requisites are few. Here is a drawing which will

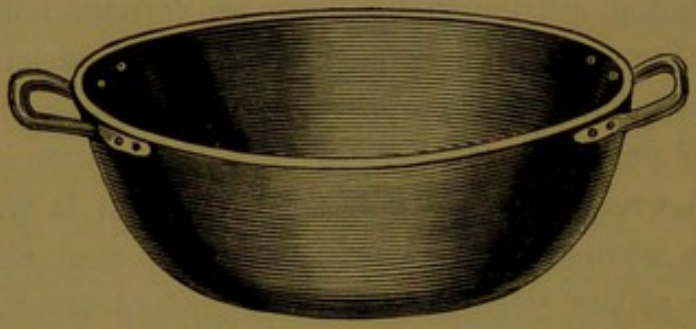
form a guide to any bricklayer or handy man, cut from a photograph,



showing almost every brick and where to place it. To build this, 100 common bricks, as well as 12 fire bricks would be required; also a cast-iron furnace top, a 13 inch flat grate or furnace bottom, a piece of iron bar 12 inches long, 6 inches wide, and a quarter inch thick. If on a stone floor, you could commence to build; if wood, either take the wood up and put down concrete, or lay a thick stone slab over the floor and build over the top, so that the ash pit is well protected against fire. In commencing to build, first form your ash pit (A) by raising the two pillars (BB) four bricks high and three bricks from back to front, or, in other words, 2 feet 3 inches. Leave the space for ashes 9 inches across, the stove will then be 2 feet 3 inches square. When the pillars are four bricks high, lay the piece of 12 inch iron between the two pillars to carry the top course of bricks; let the ash pit be 18 inches from the front; build in the back solid. Now place the square grate between the two pillars, 4½ inches from the front of the stove. Now form a circle 9 inches in diameter, by placing the fire-bricks on their ends round the grate, then build up the sides of the stove to the level of the top of the fire-bricks; pack the fire-bricks well up with rubble, cementing the whole firmly with fire-clay. The furnace must be built near a chimney; when the flue is being formed, half one of the fire-bricks, which stand upright and form a small flue, having the iron stove top for a covering, letting it run into the chimney. Build up the chimney all round the flue, so that it might have a good draught. When the furnace has been built and the top surface levelled, the furnace top should be placed on damp mortar or fire-clay, so that it will adhere firmly. In this case, the cast-iron plate should

be 2 feet 3 inches square, with a 9 inch hole in the centre. It will then match the brick-work built as per instructions, but a stove-top can be had any size with larger or smaller hole and the brick-work built accordingly. Reducing rings are also made to fit the stove top, which will make the hole smaller. These are very useful for boiling smaller quantities of sugar for stripes and other purposes. The cost of plate and necessary iron work—about £1 10s—from any machine maker.

Having got the furnace fixed, it is now absolutely necessary to have a copper pan, the size, of course, according to trade requirements, but have it large enough, as some sugars foam a great deal, requiring plenty of room, besides it is just as well to allow for increase. We must expect to do bigger things when we have a furnace to work with.

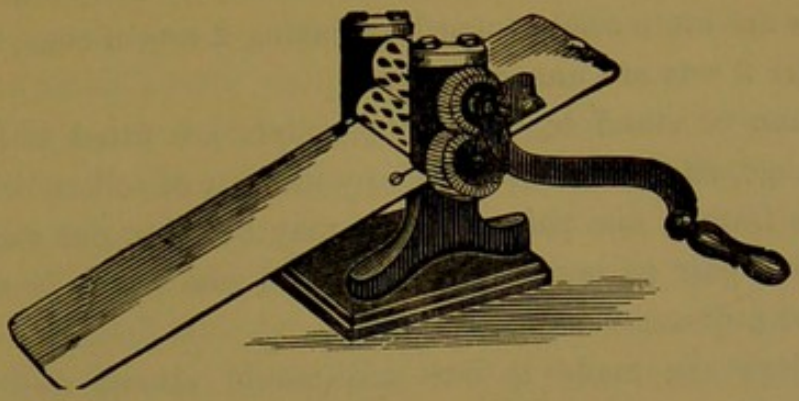


COPPER SUGAR BOILING PAN.

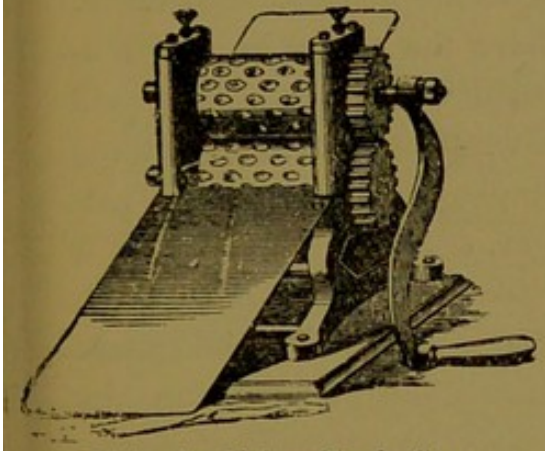
A pan something like the above, say 12 inches across the top and 6 inches deep, would be sufficient to boil from 14 to 20 lbs. of sugar at a time. With these simple appliances, we could comfortably make 2 cwt. of various sorts of boiled sugars per day. We have no need to go further with these directions, as when additional work is required, the experience gained with these appliances will teach the learner better than books what he further wants to increase his facilities. Machine makers will give him all information respecting their various, ever-changing, and augmenting labour-saving appliances.

More slab room would be required for a furnace doing 2 cwt. per day than the one plate described; one or two larger ones would be necessary. Then, practically, that would be all needed for toffees, candies, creams, rocks, and hand-made goods generally, with the exception, perhaps, of a hook to pull the sugar for stripes, which is described under "striped goods."

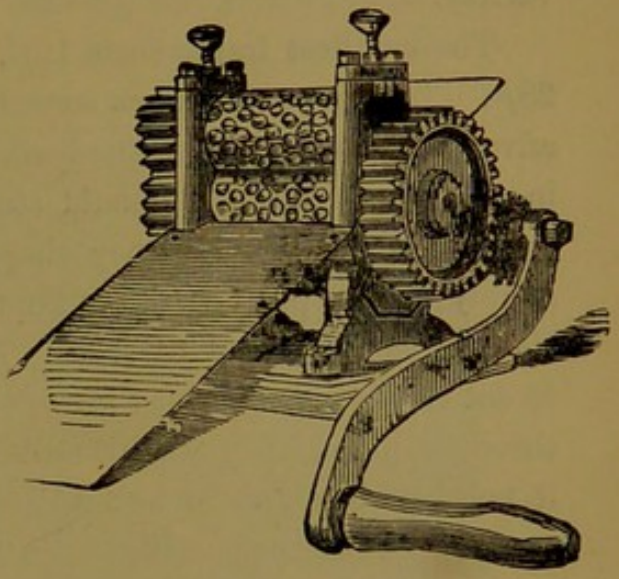
SUGAR BOILING MACHINERY.



$3\frac{1}{4}$ in. by 2 in., Single Gear.



$3\frac{1}{4}$ in. by $2\frac{1}{4}$ in., Single Gear



$4\frac{3}{4}$ in. by $2\frac{1}{4}$ in. Double Gear.

We cannot go any further into the mysteries of this art successfully, unless we provide ourselves with something like the above to enable us to make drops. They are indispensable, and if we are to go on, we must have them. They are to enable us to make drops, and every confectioner sells drops, these machines are made to suit all classes of trade, big and little. The small ones make just as nice drops as the large ones, and even the smallest will turn out in the course of a day 2 or 3 cwt., so that for retail purposes this quantity would generally be sufficient. A description of the machines will not be out of place, and may guide the reader in his selection. Here are 3 illustrations, showing what is known as the smaller size in common use—the $3\frac{1}{4}$ inches long by 2 inches in diameter, the $3\frac{1}{4}$ long by $2\frac{1}{4}$ in diameter. Both these are what is called single gear, *i.e.* with cog wheels at one

end only; the other block shows a 4¾ inches long by 2¼ inches in diameter, double gear, *i.e.* having cog wheels at each end, the latter being larger are more easily turned by having 2 sets of cogs, the former being smaller 2 sets are unnecessary.

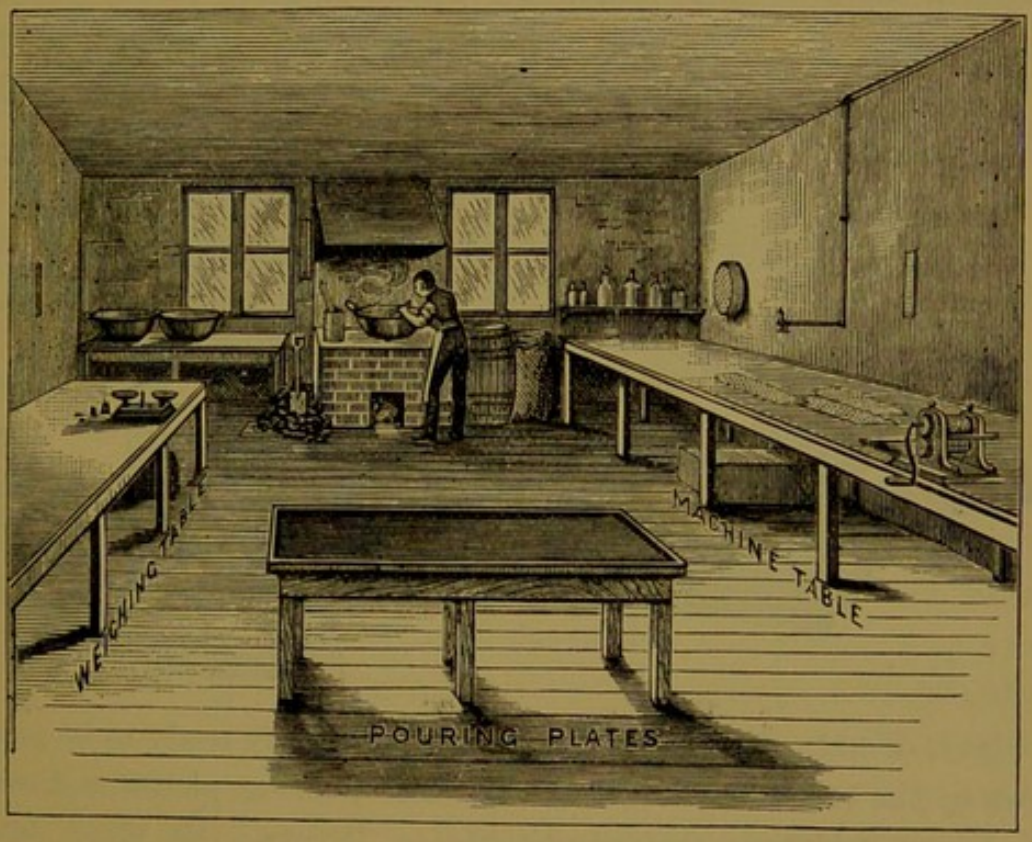
The frame or stand in which the rollers are fitted is made to a standard gauge, so that it admits of any number of rollers being placed in the same frame; one pair of rollers may be taken out and replaced by a different pair in one minute, so that one frame is all that is necessary for any number of rollers.

The rollers are made to cut and mould almost any shape or pattern—raspberries, pears, grapes, horses, dogs, leaves, in endless variety.

The smallest frame costs 12/-, and each pair of rollers to fit about 28/-. The larger sizes are considerably dearer. For exact prices, see advertisements at end of the book or write to the makers. Beginners, in selecting machines, should study to have the rollers as useful as possible, and not buy fancy shapes to begin with, because they will simply cut or print the pattern they were intended for, and nothing else can be made out of them. For example, suppose you buy a pair to cut elephants, you may stripe your sugar, case your sugar, or put it through plain, they would still be elephants. On the other hand, if you bought a pair of ball rollers, see what a variety you could make out of a single pair. With a little judgment and manipulation, you could make acid balls, brandy balls, rose-buds, striped balls of various sorts. Another useful pair are acorn rollers. You could, at a pinch, make pears, grapes, pine-apples, ripe pears, acorns, &c. To do this only requires a little arrangement of colours and flavours—there is not much difference in the shape. A couple of pairs of rollers more useful to a beginner it would be difficult to name.

Where a wholesale trade is the aim, 4¾ double gear rollers are the most useful, as they are as large as can be conveniently turned by hand, and are capable of doing an immense amount of work; whereas, if 3¼ size are bought in the first place and afterwards found too small, the whole lot would require to be replaced, very little being allowed for second hand rollers. The larger rollers can be bought a pair or two at a time, and those in hand would always be worth their cost, while increased trade would simply mean a few more pairs extra, the saving on labour when a quantity is required would soon pay the difference

and show a profit. These machines should be fixed on a corner of a table, from 7 to 10 feet long and about 2 feet 9 inches to 8 feet wide. The table should have a cast iron top, or better still, the top may be made of a smooth stone slab, 'not slate'. Of course, the size of the table would be determined by the accommodation of the room, extent of trade, and size of the machine. Another table covered with wood at the opposite side of machine bench, would be useful for mixing, weighing, bottling, labelling, and packing. On one side of the furnace have a shelf or small table for holding bottles of flavours, acids, and the like; the other side may be used for storing sugar and other heavy and bulky materials. Arrangements for coke should be made close to the stove on either side. The following drawing will give a rough idea of what is meant.



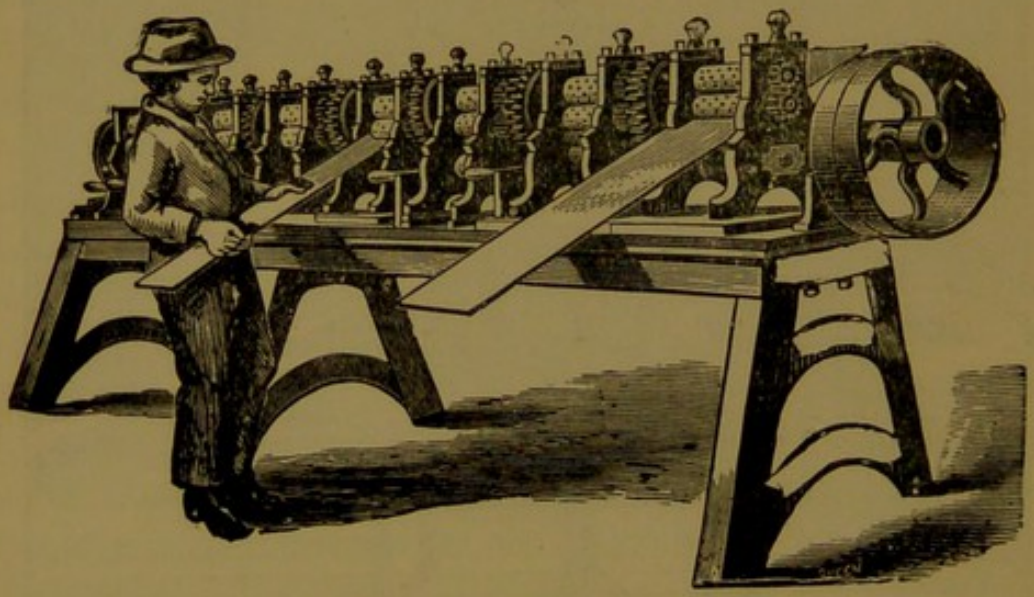
ORDER AND METHOD IN WORKSHOP.

Having so far got our workshop arranged the next thing is to keep it in order. Sugar boiling is a dirty sticky business, especially on wet days, unless every part is kept scrupulously clean and dry, slabs and tables should be washed, no trace of sifting, scraps, or boiled goods

should be left exposed to the atmosphere during the night, the floor well swept, and a little clean sawdust put down every night.

The comfort and ease in working in a clean place far more than outsets the trouble and time it takes to keep it in order, besides the goods are much drier, brighter, and easier to bottle or pack. Nothing is more unpleasant than to work with sticky slabs, slimy machines, and dirty scales; the boil adheres to the slabs, sticks in the rollers, spoiling the shapes and become cloudy and spotty in weighing. We are not writing without knowledge. Any one who has worked or visited small work-shops, can endorse the value of these remarks and call to mind this imaginary picture. However, there are exceptions, still the hint will be useful in a good many cases.

Of course our boiling shop is but a small primitive affair. It is almost superflous to state that large makers have big rollers in steam power benches.



Six, eight, or ten pairs of rollers in a row, all or any ready to be put in motion by the touch of a lever. Cold water pouring plates, and many other labour and time saving appliances. Perhaps the most recent important invention for the boiling room is that patented by Mr W. Brierly, of Rochdale. It consists of a complete boiling plant, the pans being especially constructed to boil sugar high enough for drops by steam. One cwt. of sugar can be boiled ready for manipulation in 10 minutes. The quality of the goods made by this method, it is stated by those who have adopted it is better, while the saving of time and labour as well as fuel is considerable.

The details of expensive mechanical appliances would be interesting to but a small minority of readers, and the makers are always pleased to supply up to date particulars when requested.

METHOD OF SUGAR BOILING.

In sugar boiling, as in everything else, science has had a look in and systematised, that which was formerly a crude rule of thumb arrangement, it could not be called method, which could only be acquired by long and close application of the nose and teeth, or to speak more correctly, the gums to the boiling pan, in order to guess as near as possible when the boil was ready. Scissors was the weapon, *par excellence*, with which the confectioner cut his drops, and fingers the only tool for moulding, shaping, pinching, striping, rolling and twisting the variety then known as the goodies of the day.

The process was tedious, laborious, and costly, but it must be admitted, in many cases, the results are unmatched by anything we have yet produced by machinery. However, it was only by many years practice, and then only by clever workmen, could such results be obtained. The art has now been reduced to a system thoroughly understood and easily acquired, various appliances having been introduced, the assistance of which will enable an aspirant to learn the business correctly and quickly. Of course, practice alone will make an expert, at the same time no goods need be wasted to gain this practice. Plain drops and toffees might be made equal to those of the best houses with very little experience, the ornamental and artistic kinds it would only be a question of degree and appearance, they would still be sweet and go with the all sorts or mixtures, and bring at least a price to cover cost, if not a profit. If the learner will study the following instructions, the author guarantees to place him in a position to boil sugar as correctly as the most experienced workman. To accomplish this, the reader should provide himself with a sugar boiler's thermometer, which may be had from any of the machine makers or from the Author, price 7/6. The cost of this is very soon repaid by the saving of material and time, as well as anxiety. While the sugar is undergoing the process of boiling, it is almost impossible for a learner to determine the exact degree which the sugar has attained without its aid, and even the journeyman finds it so useful that you

will find very few indeed who boil sugar without it; in fact, many of the large shops will not allow a sugar boiler to work without one. For almost any purpose the following degrees will be found all that is necessary. For example, put into the pan in which you intend to boil, 7 lbs. of loaf sugar, broken into small pieces, or white crystalized sugar will answer the same purpose, together with one quart of water, place it on the fire and allow it to boil. When it comes to the boiling point (if lump sugar) lift it of and see if the sugar is all dissolved; if not, use your spatula (that is a stick about two inches wide and a couple of feet long), and crush any lumps which may remain against the side of the pan; replace it again on the fire, put a cover over the pan, and allow it to boil for ten minutes; then take off the cover and put the thermometer in the pan, immersing the bottom part of it in the boiling sugar, and let it remain there until the sugar is boiled to the degree you require. The following five degrees are those used by confectioners for different purposes :—

1st. The Smooth, viz., 215 to 220 by the thermometer. When the mercury registers these figures the sugars may then be used for crystalizing creams, gum goods, and liqueurs.

2nd. The Thread, viz., 230 to 235 is the degree which is used for making liqueurs.

3rd. The Feather, viz., 240 to 245. Only a very few minutes elapses between these degrees, and the sugar must be watched closely during the boiling at this point. This degree may be used for making fondants, rich creams, cream for chocolotes and fruit candying.

4th. The Ball, viz., 250 to 255. The sugar at this point is used for making cocoanut and other candies, cocoanut ice, and almost every description of grain sugar generally.

5th. The Crack, viz., 310 to 315. This is the degree which is used, with little variation, for all kinds of drops, rocks, toffees, and all clear goods, whether for the purpose of passing through machines or manipulating with the hands.

These degrees can be tested by an experienced hand without the aid of the thermometer, and the learner may accustom himself by trying them in the following manner :—Take the stem of a clay pipe and dip it into the sugar as it boils, draw it out again and pass it through the forefinger and thumb; when it feels

oily you will find by looking at your thermometer that it has reached the degree of smooth, 215 to 220, by the glass.

The next degree, or thread, may be tried by your taking a little of the sugar off the pipe between your finger and thumb and part them gently; if you see small threads hang to between your finger and thumb, that degree has arrived.

For the degree of the ball, 250 to 255, you must have by your hand a small jug of cold water; when you draw the pipe out of the sugar dip it in the water, and when taken out of the water, if you can work it up like a piece of putty, you have got the degree of ball.

The degree of crack must be tested in the same way, and the sugar must leave the pipe clean; dip it again into cold water; when off the pipe break off a piece with your teeth; if it snaps clean in your teeth, pour sugar on the slab at once.

Note.—This last degree must be tried sharply in giving the process for trying it without the thermometer. We caution all beginners to get a thermometer, as practice alone can instruct you without. It is also necessary to state that the thermometers differ a little, and should be tested.

The Auther makes it a rule of trying every thermometer he sells to customers, and guarantee them to register according to instructions given in this hand-book. During hot weather, it is necessary to bring the sugars up to the full degree; during the winter months, the lower degrees marked will answer the purpose.

CUTTING THE GRAIN, LOWERING OR GREASING.

Almost all sugars, especially refined, whether loaf, crystalized or granulated, and most sugars known to the trade as pieces will, if boiled beyond the degree of ball, or 250 by thermometer, when turned out, the pan becomes cloudy, then grainy, and ultimately a solid lump of hard opaque sugar. To prevent this candying, as it is called, several agents are used, such as glucose, cream of tartar, pyroligneous acid, vinegar, &c., the action of which will cause the sugar to boil clear, be pliable while hot, and transparent when cold. It is therefore necessary to use some lowering agent for all boilings intended for clear goods, such as drops, toffees, rocks, &c.

Experience has taught most of the old hands that two of these agents possess all the merits necessary for the purpose, and are to be preferred to the others for reasons it is unnecessary to state—they are cream of tartar or glucose. A great deal could be said in favour of either or both; cream of tartar is handier and cleaner to use, as well as more exact in its action; goods boiled with it will be a better colour, and, some assert, more crisp; for acids and all best and export goods it is to be recommended—use a proportion of ½ an ounce to every 14 lbs. of sugar—we say about, as some strong sugars require a little more; this is generally measured in a teaspoon, 2 teaspoonfuls to every 14 lbs.

Glucose may be bought in either solid or liquid form, the latter is generally used by the trade. It is a thick heavy syrup, best qualities being water white, odourless, and flavourless. Being cheaper than sugar, it is valuable to the confectioner, not only for its lowering qualities, but also as a bulk producer, reducing the cost of the product. On this account, there is a tendency to overdo it by using to much, the result causing goods to become sticky and turn soft immediately they are exposed to the atmosphere, not only so, but we have seen drops running to a solid lump in bottles through being overdosed. If glucose is used in proper proportions, it makes an excellent lowering agent, and will answer the purpose first rate for ordinary drops and the like. Use 3 lb. of glucose to every 14 lb. of sugar; keep a panful on the furnace top, so that it will be always hot and may be easily measured by means of a saucepan or ladle holding the exact quantity; add the glucose when the sugar begins to boil.

HINTS TO BEGINNERS.

The information contained in this book, although chiefly intended for beginners, is not written exclusively for them. To the many confectioners who have only had an opportunity of learning one or more branches, and are often anxious to learn others, this work affords an opportunity of doing so. We have included new goods to date of going to press—these no doubt will be useful to most readers. The work has been so arranged that the most simple and easiest recipes come first under each section. These we advise beginners to try first and often. The book is not large, and will not take long to read through. It is very advisable to do this, especially is it important to novices, as here and there

additional instructions are gleaned, which is not only applicable to the class of goods under which it is written, but may apply generally.

It is absolutely necessary to at least read carefully the whole of the section, from which an odd recipe is required, to be able to thoroughly understand it, because so many different kinds are made in exactly the same way that a volume might be written reiterating the same line over and over again under each recipe. We have avoided this as much as possible, as it would be unnecessary and tedious, nor have we gone into long descriptive formulae, which only bewilder and confuse most people. We have, in our opinion, said enough and just enough to be thoroughly understood to make the recipes workable and successful. We have not one line of space to spare for redundancy on any subject. We take it that the reader has already read our remarks on cleanliness in the workshop, now just a word about the pan used for boiling. In making all clear goods, keep the sides of the pan above the level of the liquid sugar perfectly clean, some of the previous boil may adhere to the side of the pan after it was poured out; it has a tendency to granulate by the heat of the furnace during the cooking process of the next. It may be easily seen, and should be removed by means of a wet rag or sponge, or it may cause the whole boil to grain and be therefore spoiled for clear goods. When boiling candies or creams, this precaution is unnecessary. Learners should first try their hand with toffee, then candies, then clear plain drops, and then have a turn with stripes. The practice obtained in the first will be useful in experiments with the second, besides hot sugar requires quick handling, but that will soon be found out. No doubt the result of a good many attempts will have to be consigned to the "All sorts", but the only talisman is practice, carefully follow instructions, put up with hot hands until you get used to it, "don't be beat", it is to be done.

FLAVOURS AND COLOURS.

These form almost as important a part of the trade as sugar itself, and it should be the chief object of every workman to try and excel in these two important features; if you do not use good flavours, it is a moral certainty you cannot produce good sweets. Flavours for boiled

sugars should be specially prepared, those bought at an ordinary chemist's shop may do very well for flavouring custards and pastry, but are of no use for boiled sugars, in fact, better use no essence at all, as they are so weak that, to give the drops, &c., even a slight taste, the quantity required reduces the degree to which the sugar has been boiled so much that it works like putty, and sticks to the machine while being pressed through ; the drops when finished look dull, dragged, and stick together when bottled ; tons of drops are weekly spoiled by small makers using such flavours, while a little trouble and less expense would put them out of their misery, besides giving to the goods that clear, bright, dry appearance to be found in the drops of a respectable house.

It must be remembered that the flavour is the very life of the sweet. Colour may please the eye, but excellence in that alone is not all that is required. A buyer may be attracted by the eye, but he does not eat with it. Neither old or young would knowingly eat only coloured sugar. A sweet taste may be satisfied from sugar alone.

It is the variety of pleasant flavours that is desired, and it is the business of the confectioner to supply it. Flavours for sugar boiling should be as concentrated as it is possible for them to be. Several large houses who have confined their attention to the wants and requirements of the confectionery and mineral water trades, have succeeded in producing fruit essences of a quality, which is a pleasure to work with, being very powerful, little is required to give the boil a rich flavour, consequently it passes through the machine easy, forming a perfect drop on which is a clear imprint of the engraving characteristic of the machine used. Essential oils used by confectioners are those having an agreeable aromatic flavour, and should be used in their original strength, without being adulterated or reduced. It is absolutely necessary that they should be pure and fresh, more particularly the oils of lemon and orange, as when not fresh and pure they partake of the flavour of turpentine, and are particularly unpleasant to the taste.

Small makers would do well to buy carefully from a good house not more than would be used up in two or three months, especially the two before mentioned. Some oils, on the contrary, improve by keeping, such as peppermint and lavender. All essences and oils are best kept in a cool dark place, well corked.

These oils being powerful, popular, and expensive, they are frequently adulterated. Cream of tartar and tartaric acid on account

of the price, is often increased, the former with different cheap white powders, the latter usually with alum. Many people fail in the process through no fault of their own, but simply through being supplied with inferior ingredients, it is therefore of importance, that colours, flavours, &c., should be purchased at some respectable house.

The colours prepared, consisting of several very nice shades of yellow and red, also coffee brown, jetoline black, damson blue, and apple green; they are in paste, ready for use; being vegetable, they are guaranteed strictly wholesome, and may be used with confidence. Nevertheless, there are several colours which confectioners may prepare themselves, both on the ground of economy and convenience, viz. :—

Cochineal.—For extracting the colour from this insect this is a good recipe :—grind in a small mill, or crush with a large rolling pin or heavy bottle, (or it may be already ground), 4 ozs. of cochineal, put it into a large pan with three pints of water, place it on your fire or stove, when it boils add 4 ozs. of pearlash, (or salts of tartar will do), 4 ozs. of ground alum, and 4 ozs. of cream of tartar, allow it to boil for fifteen minutes, then add 2 lbs. of sugar; when the sugar has dissolved strain it through a fine hair sieve or flannel, stir it occasionally while on the fire and watch that it don't flow over the pan while boiling; should this colour be wanted in a paste, allow it to boil five or six minutes after it has been strained. Cochineal makes a pretty red and is a harmless colour.

Saffron.—This decidedly makes the prettiest yellow colour; the colour may be extracted almost in the same manner as you would get an infusion from tea; for example, take one eighth of an ounce of saffron, put it into a jam pot and fill the pot three parts full of boiling water, allow it to stand on your stove or by a fire for one or two hours; when ready, strain a sufficient quantity into your sugar while boiling, till the desired shade is obtained.

Turmeric.—This is a cheap yellow colour; it requires simply mixing with a little cold water, and add either while the sugar is boiling on fire, or used as a paste and mixed in after the sugar has been poured on the slab; this colour is also used by pastry cooks, to represent the use of eggs; a little of it improves the colour and makes cakes look rich; being harmless, it may be used with freedom—the objection to it is its taste and smell.

Yellows of different shades may also be extracted from Persian

yellow berries, Turkey yellow berries, and Faustic. These colours are harmless, and may be used by the trade. It is advisable to buy the colours already prepared from harmless vegetable colour makers.

Blue.—Use powdered Prussian blue (soluble) or ultra-marine blue of the best quality ; if these colours can be had genuine and of good quality they are harmless, but the high price frequently tempts adulteration, which is anything but wholesome ; therefore, taking into consideration the very small quantity of the colour which is required, I should advise the readers to use W. J. B. Bush & Co.'s vegetable blues, which can always be relied on.

Green.—There are few greens which are not poisonous, therefore either use W. J. B. Bush & Co.'s vegetable green or mix a blue and yellow together.

Purple.—Purple colours may be produced by combining a blue with red.

Orange.—A mixture of red with yellow will produce an orange ; vary the proportions of each according to the shade you require.

Red.—Cochineal, carmine, Brazil wood, or cherry red.

Aniline Colours.—There is a class of colour manufactured from coal tar, called aniline colours, they may be had in almost any shade of colour, and are very powerful in colouring properties ; they are used largely by dyers, and I must say by confectioners ; although I could not guarantee them harmless in the same way that vegetable colours can be guaranteed, I have never known them to have been injurious. I have personally used quantities of those colours, both for sweets and preserves, and could mention large and respectable houses who are at this present moment using nothing but aniline colours in the sugar boiling and preserving departments. It is very important only to buy those aniline colours which are free from traces of poisonous metals, and known by experience to be harmless. For colouring jams and jellies the majenta crystal (aniline) will be found cheaper and better for this purpose than any other colour. For extracting the colour from the powders this simple recipe will be essential, viz. : Dissolve the colours with boiling water or alcohol ; use them with care, as one or two drops are sufficient to colour a small boiling of sugar.

POISONOUS COLOURS.

I deem it necessary to add the following list of poisonous colours, and to state that they should under no circumstances be used even in a stripe, as they are highly dangerous to health. I give this list that people may not get into trouble ignorantly or innocently.

I know sugar boilers who are very partial to use a little chrome yellow for stripes; it should not be done, as it is a deadly poison, although a nice colour.

YELLOW.—Chrome yellow, sulphate of arsenic, iodide of lead, in fact, no preparation of lead or arsenic.

RED.—Vermillion (Vermillionite), red lead, sulphate of mercury, oxide of lead.

BLUE.—Blue verditer, carbonate or sulphate of copper.

GREEN.—Emerald green, arsenite of copper, green verditer, carbonate of copper, Scheel's green, Emerald substitute, &c.

WRINKLES WORTH READING ON SUGAR BOILING.

Experience teaches daily, without a desire to be dogmatic or savour of pedantry, the writer might be allowed to suggest little improvements and alterations, which, he can assure the reader, might, with advantage, be adopted in more workshops than one with which he is familiar, both in the interest of employer and the credit of the workman.

It is or should be the aim of every workman to do the best he can with the tools and materials he has at his disposal. We do not expect to get white acids out of yellow crystals, or bright colours out of pieces, but in many cases we have seen yellow acids made from white loaf sugar and dull colours of good Dutch crushed. The former is impossible, the latter the result of carelessness. I have known workmen, and good workmen too, who could not, or did not, make a first class acid drop, no matter what sugar they had to work with, they were too big to be told, anything was put down as the cause—bad fire, pan too thick or too thin, or not the proper water.

To make an acid drop to perfection, the pan must not only be clean, but bright; use best white sugar, and just enough water to melt it, with a little extra cream of tartar (no glucose); boil on a sharp fire to

305 ; after passing through machine, well dust with icing sugar and bottle. Beginners should not try to work with less water, as the boil is more liable to grain, which can be seen by an expert and avoided. Before putting on the boil, see that there is sufficient fuel on the furnace to carry through the operation—to make up a fire during the process spoils the colour and quality—the sharper the sugar is boiled the better the appearance and durability. When boiling common sugars, have the pan large enough—some throw up a deal of foam when they reach the boiling point and are liable to flow over ; watch closely, and if unable to beat the foam down, lift the pan on to the side of the fire a few minutes until boiled through. Many weak sugars burn on a clear fire before they come to a degree of crack. In this case, sprinkle a little fresh fuel or ashes over the fire and replace the pan. Should it again catch, repeat the operation, nursing it up to the desired degree. Bad boiling sugar is very troublesome. A good plan is to make a rule of straining the whole batch just after it boils through a very fine copper wire or hair sieve ; this prevents foreign matter such as grit, sawdust, or even nails, which is often mixed with the sugar, getting into the goods. Keep thermometer when not in use in a jar of water standing on the furnace plate by the side of the pan, wash out the jar and fill it with cold water every morning ; keep the thermometer clean, especially the top part, as the sugar which adheres to it becomes grainy, and might spoil a whole boil. After making dark sweets, thoroughly wash the thermometer before putting it into a light boil.

In using colours for drops and clear goods, use them in the form of a paste where practicable, then you can mix them in when the boil is on the slab, thus saving your pan ; keep the colours damp in jars, look over them every night and, where necessary, add a little cold water to keep them moist, or the top may get dry and hard, which would make the goods specky. Use a separate piece of stick for each colour to rub in with, and be very careful not to use too much colour ; a very little goes a long way with a clear boil ; goods are more often spoilt by using too much than too little ; more can always be added if shades are too light, but there is no remedy if you have added too much. When colouring toffees, this must be done in the pan ; liquid colours are best ; trouble will be saved if used in the following order. Suppose Raspberry, Everton, and Lemon Toffee were wanted, make the lemon toffee first, add the saffron just before the boil is ready, then the lemon and pour

out ; make the Everton toffee next in the same way, adding the butter before the lemon ; then make the raspberry. In this arrangement there is no necessity of steaming out the pan. Had the raspberry toffee been made first, the pan would have to be cleaned again before the lemon or Everton toffee could have been made, because it would have been red.

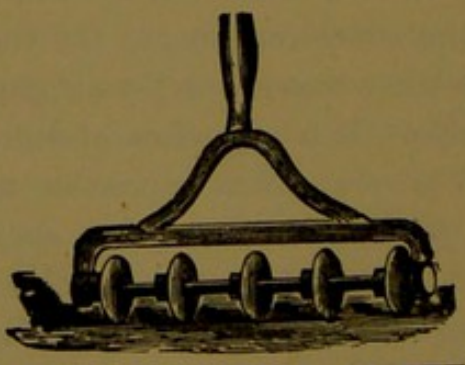
Measure the flavours in a graduated glass ; wash out the glass frequently, or it will get rancid ; weigh the acid and see that it is well ground ; if it has become dry and lumpy, rub it down to a powder with a rolling pin or heavy bottle on a sheet of paper before using. In using fruit essences, a little powdered tartaric acid throws up the flavour, half the essences will have a better effect. Put the acid on the boil after it has been poured on the slab in a little heap, and pour the essence over it, then thoroughly incorporate the whole.

Use the best oil for the slabs with a clean flannel cloth ; keep the cloth in a saucer, if it lies about it falls on the floor and picks up dirt, and carries it to the pouring plate. When it gets hard or gritty, burn it at once and get a new one, or it may be used by mistake and make a mess. We have seen the beauty of a boil spoilt scores of times by using dirty rags and rancid oil. A sugar boiler cannot be to careful in these little details, the success of his work largely depends upon it. It is easy to inaugurate a good system, and much more comfortable to work to it than a slovenly " what shall I do next sort of a method." Know where to find and put your hand on everything ; when the boil is hot there is no time to look for what you require. " A place for everything and everything in its place " should be a practical feature in every boiling shop.

STICKY SWEETS.

Perhaps there is nothing more annoying to the trade than sticky boiled sugars, all clear goods when exposed to the atmosphere will turn damp, especially in wet weather. It is a question of degree, some slightly and some will run almost to syrup ; it is impossible to obviate the former, but the latter can be prevented. Great care should be used in adding the lowering, whether cream of tartar or glucose, too much of either will cause the goods to run immediately they are turned out. Weak or inferior sugars, or not sufficient boiling, has also this effect. We know

of no reliable agent which will altogether prevent this result, but we do know that a careful arrangement of the different proportions, using good sugar and well boiling greatly mitigate, if not altogether prevent the grievance. Goods intended for exposure should contain just sufficient lowering to prevent the boil from going grainy and boiled right up to the standard. Of course different sugars will carry more or less lowering, but this can be easily tested by the workman. A few experiments will determine the exact quantities for each boil. There is no excuse for drops sticking in bottles when corked, this should not occur, if it does, the fault is in the making ; the water has a great deal to do with causing the sweets to be sticky. The writer has experienced this in several country places, where the only supply of this indispensable ingredient was drawn from artesian wells. To look at it, it was all that could be desired—a beautiful cold, clear, and wholesome beverage. Of its chemical constituents I do not pretend to give an opinion, but the drops and other clear boils for which it was used got damp directly they were exposed, and would have run to a syrup had they not been covered up. The goods keep all right in bottles, but it is very annoying, not to speak of the injury and loss to a business, when this is the position with regard to the water supply. The only remedy we could suggest, and which was very successful, was powdered borax. We used this in the proportion of a teaspoonful to every 14-lb. of sugar, adding it just as the sugar began to boil. Borax has been found useful with any water when making goods to be exposed in the window or on the counters, such as toffees, rocks, and clear boiled sugars generally. Where the supply of water, as in most large towns is suitable, given good sugar, cream of tartar or glucose in proper proportions, and careful boiling up to the standard, the addition of borax is unnecessary, and should only be resorted to under special circumstances.



EVERTON TOFFEE CUTTER.

PLAIN TOFFEE.

14-lbs. White Sugar.
½-oz. Cream of Tartar.
2 Quarts Water.

Process.—This is an easy and capital recipe to begin with. The process is practically the same as for all other clear goods, but the ingredients being few there is little chance of their getting complicated. If the reader has a thermometer it is hardly possible to make a mistake, besides it will make the instructions more intelligible; should he not possess this appliance, we must ask that the instructions, "How to Boil Sugar," should be committed to memory, as it would be tedious and a great waste of time and space to keep explaining how to tell the different degrees through which the sugar passes before it comes to the point required for the different goods given in this book. For this and other reasons I will assume the learner to be working with one.

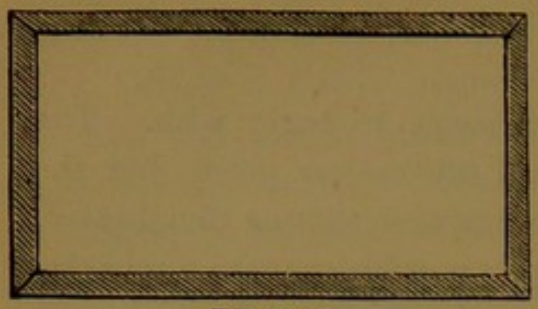
Put the sugar and water in a clean pan, place it on the fire and stir it occasionally till melted; when it comes to the boil, add the cream of tartar and put a lid on the pan; allow it to boil in this way for ten minutes, remove the lid and immerse the bottom part of the thermometer in the boiling liquid and allow it to remain in this position until it records 310 degrees, then quickly take out the thermometer, lift off the pan and pour contents into frames, tins, or on a pouring plate, which have been previously oiled. If on pouring plate, mark the boil into bars or squares while warm with a knife or toffee cutter; when quite cold, it is ready for sale.

LEMON TOFFEE.

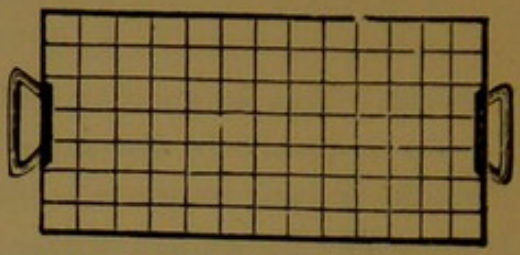
14-lbs. White Sugar.
½-oz. Cream of Tartar.
2 Quarts Water.
Lemon Flavouring.
Saffron Colouring.

Process.—Proceed as directed for plain toffee. When the sugar reaches 305 degrees, add a few drops of saffron colour; when it reaches 310 degrees, add a few drops of oil of lemon and pour out immediately into frames or tins; or if on pouring plates, mark out into bars or squares before it gets cold. The pouring plate should be level, so that the sheet be all the same thickness.

IMPROVED EVERTON TOFFEE OR BUTTER SCOTCH FRAME.



FRAME



CUTTER

BUTTER SCOTCH.

8-lbs. White Sugar.
1-lb. Fresh Butter.
¼-oz. Cream of Tartar.
1 Quart Water.
Lemon Flavouring.

Process.—Melt the sugar in the water by an occasional stir when the pan is on the fire, then add the cream of tartar and boil up to 300; lift the pan on to the side of the furnace and add butter in small pieces broken off by the hand; slip the pan on the fire again, adding the lemon flavour; let it boil through, so that all the butter is boiled in, then pour into frames; when partly cold, mark with cutter into small squares; when cold, divide the squares; wrap each in wax paper, then tinfoil; sold generally in ½d, 1d, and 3d packets, the latter containing 6 halfpenny pieces. N.B.—There is good butter scotch and better butter scotch, but no bad butter scotch; this quality may be improved by the addition of a larger proportion of butter; some makers would put 2-lb. or even 3-lb. to this quantity, but that would be regulated by the class of trade and the size of the half-penny squares. These frames are made to hold 144 squares; a boil this size will make each square weigh 1-oz., but any weight of square may be arranged by adding or deducting from the boil.

EVERTON TOFFEE.

12-lbs. White Sugar.
2-lbs. Dark Sugar.
2-lbs. Fresh Butter.
½-oz. Cream of Tartar.
2 Quarts Water.
Lemon Flavouring.

Process.—Melt the sugar in the water, add the cream of tartar, and boil the whole to the degree of 300; lift the pan on the side of the fire, put in the butter in small pieces, place the pan again on the fire and

let it boil through ; add the lemon and give it time to just mix in, then pour out the contents into frame, or on pouring plate, to cut up into bars. Everton toffee and butter scotch are similar, except in colour ; same remarks as to quality will apply in both cases ; if the fire is very fierce, do not put the pan down flat on it after butter is added ; nurse it gently to prevent burning ; a little fresh coke shaken over the fire would assist.

RASPBERRY TOFFEE.

14-lbs. White Sugar.
½-oz. Cream of Tartar.
2 Quarts Water.
Cochineal Colour.
Raspberry Flavour.

Process.—Bring the sugar and water to the boil, add the cream of tartar, put on the lid for ten minutes, then uncover and immerse the thermometer ; continue to boil to 300 ; tinge a bright red with liquid cochineal ; add raspberry essence ; pour out on to frame or pouring plate, and mark into bars or squares of convenient size ; when cold, the toffee is ready for packing and sale.

FIG TOFFEE.

10-lbs. Good Yellow Sugar.
2-lbs. Glucose.
3-lbs. Figs, Chopped Fine.
3 Pints Water.

Process.—Boil the sugar, glucose, and water to a weak crack, 295 ; lift the pan partly off the fire, putting a piece of iron under it to prevent burning ; add the figs, gently letting the whole thoroughly boil through and mix ; pour in oiled tins or on slab, and mark into squares. When adding the figs let them drop in through the fingers, not in a heap.

WALNUT TOFFEE.

5-lbs. Brown Sugar.
5-lbs. Crystal Sugar.
2½-lbs. Glucose.
3-lbs. Walnuts.
2 Quarts Water.
Lemon Flavouring.

Process.—Shell the walnuts, peel off the skin, chop very fine. Boil the glucose, sugar, and water as before directed to the degree of weak crack, 300. Lift the pan a little from the fire ; add the prepared nuts

by letting them run through the fingers gently; let the whole boil through, then add a few drops of the oil of lemon; when thoroughly mixed in, pour out the boil and mark into bars before too cold. The flavour is improved by roasting the walnuts a little before putting in the boil.

BARCELONA TOFFEE.

5-lbs. Brown Sugar.
5-lbs. Crystal Sugar.
3-lbs. Barcelona Nuts.
2-lbs. Glucose.
2 Quarts Water.
Lemon Flavouring.

Process.—Prepare the Barcelona nuts by chopping them fine. Boil the sugar, glucose and water to the degree 300. Remove the pan a little from the fire, add the nuts carefully; when thoroughly boiled through and amalgamated, add a few drops of lemon and pour out contents into frame or on pouring plate, and mark into bars.

COCOANUT TOFFEE.

6-lbs. Granulated Sugar.
4-lbs. Brown Sugar.
2-lbs. Glucose.
2-lbs. Desiccated Cocoanut, Unsweetened.
3 Pints Water.
Lemon Flavouring.

Process.—Melt the sugars in the water, bring it to the boil, add the glucose, and continue to boil to the degree of 300; lift the pan a little way from the fire; let the desiccated cocoanut run gently in the boil; continue to boil until the lot is well mixed through; add a few drops of oil of lemon and pour out in frames; use the lemon cautiously, too much spoils the flavour.

COCOANUT TOFFEE, or STICK JAW.

6-lbs. Granulated Sugar.
4-lbs. Brown Sugar.
2-lbs. Glucose.
4 Large Cocoanuts, Sliced.
3 Pints Water.

Process.—Boil to crack, 310 by thermometer, the sugars, glucose, and water; have the cocoanuts freshly peeled and sliced ready; raise the pan two or three inches from the fire; slide in the nut, stirring gently with spatula to keep them off the bottom till well boiled through; then pour out in tins or frames. N.B.—Stir gently only the one way or you may grain the boil.

EGGS AND BACON.

10-lbs. White Sugar.
2½-lbs. Glucose.
3 Pints Water.
1-lb. Nonpareils.
1 Cocoanut.
Cochineal Colouring.

Process.—Cut a large cocoanut into slices, dry them and lay them on the pouring plate in rows about half inch apart; sprinkle between them thickly some nonpareils of various colours (hundreds and thousands). Boil to crack the sugar, glucose, and water; tinge with cochineal, and carefully and evenly pour the contents over the pouring plate, disturbing the nut and nonpareils as little as possible. A good plan is to have a small shallow ladle with an open spout, into which pour a little of the boil, run over the plate a small stream from the ladle first, this will bind the nut, &c., and keep them in their places while the bulk is being poured out.

ALMOND HARDBAKE.

10-lbs. Good Brown Sugar.
2-lbs. Glucose.
3-lbs. Valencia Almonds.
3 Pints Water.
Lemon Flavouring if desired.

Process.—Split with a sharp knife the almonds, lay them face downwards on a oiled plate, cover the plate as closely as possible; boil the glucose, sugar, and water to the crack, 305; remove the pan from the fire and pour contents carefully and evenly over the almonds; the addition of a little lemon or almond flavouring will improve it. N.B.—See remarks *re* ladle in previous recipe.

ALMOND ROCK.

10-lbs. Brown Sugar.
2-lbs. Glucose.
6-lbs. Sweet Barbary Almonds.
3 Pints Water.

Process.—Clean your almonds by blowing out all dust and grit, pick out the shells; dissolve the sugar, water and glucose; boil the lot up to crack; pour the contents on oiled plate; sprinkle the almonds all over the boil; shake over the lot a few drops oil of lemon; turn up the edges first, then the whole boil; mix and knead it up like dough until all the almonds are well mixed in; no time must be lost in this process, or the sugar will get too hard; when firm, make a long roll of the

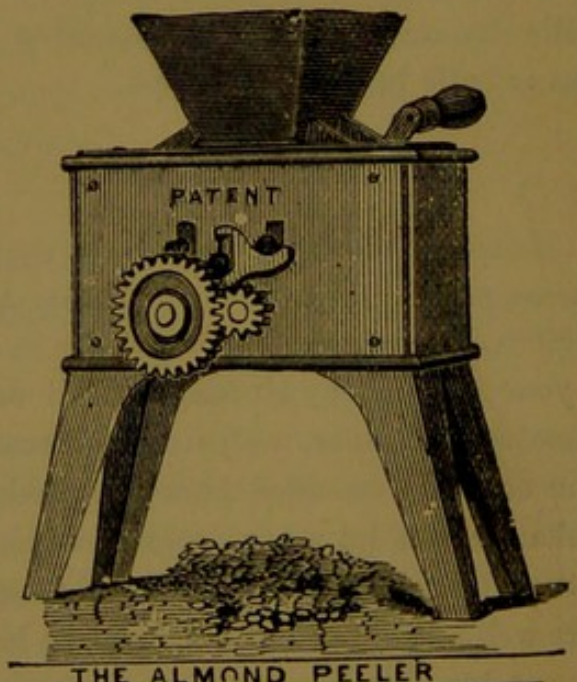
entire boil, place it on a hard wood board, and cut it up into thin slices ; it will have to be kept in shape while cutting, by turning over and pressing the sides as it becomes flat ; a special large sharp knife is used for this purpose. A smaller boil than the above had better be tried by beginners, say half the quantity. This can be done by halving the ingredients. Needless to state these remarks apply to other recipes.

FRENCH ALMOND ROCK.

12-lbs. White Sugar. 6-lbs. Sweet Almonds, Blanched.
3-lbs. Glucose. 4 Pints Water.

Process.—Boil the sugar, water, and glucose in the usual way to the degree of weak crack, 305 by thermometer, then ease the pan a little way off the fire, and let the almonds gently slide into the mass ; use the spatula a little just to keep the almonds from sticking to the bottom, stirring lightly only the one way, then watch the boil carefully till it turns a light golden colour ; lift off the pan and pour the contents into the frames. The almonds will come to the top better in tins than on pouring plates.

Of course, a better quality is made by adding more almonds, or *vice versa*. The almonds after being blanched should be spread on a tin and dried, either on the stove top or in the oven.



THE ALMOND PEELER

TO BLANCH ALMONDS.

Put any quantity of almonds into a pan or other vessel; pour over them sufficient boiling water to well cover; stir them up; in a few minutes the skins will peel off easily by squeezing them between finger and thumb. Machines are made for this purpose, or they can be purchased already blanched.

CANDIES.

LEMON CANDY.

12-lbs. White Sugar.
3-lbs. Glucose. = 20%
2 Qrts. Water.
Saffron or other yellow colouring.
Lemon Flavouring.

Process.—Melt the sugar in the water, add the glucose and boil the whole to the degree of ball, 250 by thermometer; tinge a light yellow by adding a little saffron; lift the pan off the fire, then with the spatula commence to rub the syrup against the side of the pan gently, not to agitate the whole boil; in a few minutes it will become opaque and thick; now add the lemon and stir the whole together until the entire boil becomes cloudy and grainy; pour out the contents carefully on an oiled slab; when set, mark into squares with a sharp knife; when cold, break it up. N.B.—It is unnecessary to put a cover on the pan when making candies of any kind; the boils may be run into tins; if the pouring plate is cold, cover it with a sheet of paper which has been oiled. Candies grain better and work cleaner with less waste when poured on paper.

COUGH CANDY.

7-lbs. Brown Sugar.
2-oz. Horehound Herb or Essence ¼-oz.
¼-oz. Oil of Aniseed.
3-pints Water.

Process.—If the herb horehound be used, boil it in the water on a slow fire for 15 minutes, then strain through a fine sieve; add the sugar to the liquid and boil to a stiff ball, 255; remove the pan from the fire and rub part of the syrup against the side of the pan with spatula until it becomes cloudy and opaque; add the aniseed and the essence hore-

hound, if herb is not employed, and stir the whole together until it becomes a uniform dark thick cloudy mass; pour out this boil into tins or frames; when cold, it is ready for sale. N.B.—This formula is only a guide to the process. These ingredients will make a very good candy, but most makers have a mixture of their own. They used to flavour cough candy as well as cough drops. The herbs horehound, coltsfoot, and marshmallow are often boiled together in more or less equal proportions; add the liquid used with or without the addition of oil of aniseed, clove, cassia, or capsicine. A cough drop essence is also made for this purpose by W. J. Bush & Co. A volume might be made up of the different recipes for this class of goods alone. However, we will leave the reader to mix his own remedies, as opinions differ as much on the virtues of drugs as it does on politics.

RASPBERRY CANDY.

12-lbs. White Sugar.	2 Quarts Water.
3-lbs. Raspberry Jam.	Cochineal Colouring.

Process.—Melt the sugar in the water and boil to ball, 250; add the raspberry jam and stir it well in; remove the pan from the fire; add sufficient colouring to make a bright raspberry; rub part of the mixture with spatula against side of pan until it changes a heavy opaque, then stir the whole mass until uniform; pour the contents carefully on a slab, covered with greased paper; make the sheet about ½-inch thick, mark into bars with a sharp knife, and break up when cold.

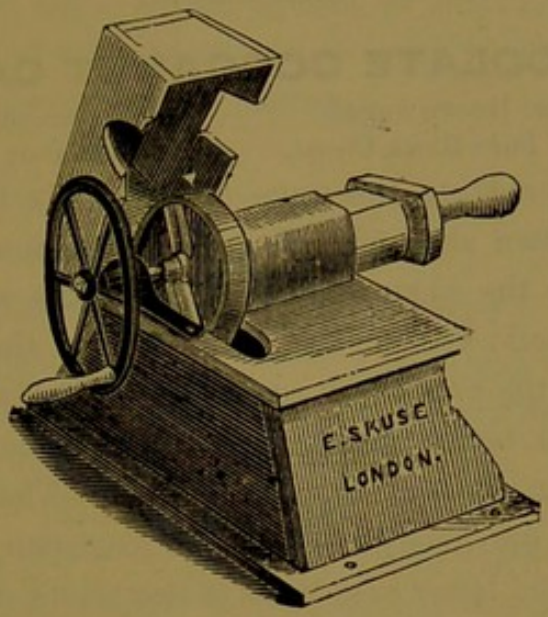
APRICOT CANDY.

7-lbs. White Sugar.	2 Pints Water.
2-lbs. Apricot Jam or Pulp.	Saffron Colouring.

Process.—Melt the sugar in the water and boil up to ball, 250; add the jam or pulp; stir well till thoroughly mixed in; remove the pan; rub part of the contents against the side of the pan with spatula until cloudy and opaque; colour with saffron a bright yellow, then stir the whole together until uniform cloudy; pour out in frames or on slab covered with oiled paper. A pinch of tartaric acid would improve the flavour, but often prevents candying, unless in the hands of an expert.

In any case, the acid should be added in a fine powder after the whole has been thoroughly grained. A palette knife is very useful for rubbing the sugar against the sides of the pan.

COCOANUT MACHINE.



BROWN COCOANUT CANDY.

14-lbs. Brown Sugar. 3 Pints Water.
6 Large Cocoanuts Sliced.

PROCESS.—Melt the sugar in the water and boil to degree of ball, then add the sliced cocoanut, stir them in; remove the pan from the fire and rub the sugar against the side until cloudy; stir the whole together until all the sugar becomes cloudy and thick; turn out the batch into tins or on slabs; mark with sharp knife into squares or bars; when cold, break up at marks. Prepare the cocoanuts by cutting them up into thin slices with a spokeshave or machine. The brown skin is seldom peeled off for this this dark candy.

WHITE COCOANUT CANDY.

14-lbs. White Sugar. 3 Pints Water.
6 Large Cocoanuts, peeled and sliced.

PROCESS.—Peel off all the brown skin from the nuts with a sharp knife; wash them and cut into thin slices; melt the sugar in the water and boil to ball, 250; add the sliced nuts, keeping the boil well stirred; when

thoroughly mixed, remove the pan from the fire and commence to grain with palette knife or spatula until the whole mass turns an opaque white; now turn out the batch into frames, or on slab, which has been covered with paper; mark into convenient size bars; break up when set hard.

CHOCOLATE COCOANUT CANDY.

10-lbs. Brown Sugar.
1-lb. Pure Block Cocoa.
4 Cocoanuts shreded.
3 Pints Water.

PROCESS.—When cracking the nuts, do so over a basin and save the milk; peel all brown skin off and cut the nut into fine shreds with machine; dissolve the sugar in the pan with the water and cocoanut milk; boil up to ball; remove the pan a little off the fire, then add the nut together with the pure block cocoa; stir the whole together; grain on side of pan as before directed; stir the whole well up and turn out into frames or on pouring plates. N.B.—The pure cocoa should either have been previously melted in a saucepan or chopped up in small pieces; in the latter case there is less waste, and the heat of the sugar would soon melt it.

FRUIT CANDY.

7-lbs. White or Brown Sugar.
1-lb. Currants, cleaned and dried.
½-lb. Sultanas.
½-lb. Sweet Almonds
2 Pints Water.
Saffron Colouring.

PROCESS.—Mix together the fruits, which should have been freed from grit and dust; boil the sugar and water to the degree of ball, 250; remove the pan from the fire; gently grain the boil by rubbing a little of the syrup against the side of the pan until cloudy, then slide in the fruit and stir the whole together, adding a little saffron to colour a bright yellow. See that the mass has changed to an opaque, then turn the lot out into frames or on pouring slab.

LEMON SPONGE CANDY.

4-lbs. White Sugar.
1 Pint Water.
1 Large Egg.
Lemon Flavour.
Powdered Sugar.

PROCESS.—Mix two teaspoonsful of finely powdered sugar with the white of the egg, beat up to a stiff paste; dissolve the sugar in the water and

and boil to weak crack, 305 ; remove the pan from the fire, drop in the egg paste together with flavour and colour ; commence immediately to well stir the whole with spatula ; the boil will rise in a minute or two, but allow it to drop again and keep stirring until it commences to rise the second time, then quickly pick up the pan and pour out contents into a wooden frame, say 8 inches square, or form a square frame on pouring plate with four loose bars (wood or iron) 8 inches long, 2 inches deep, having greased paper at the bottom.

ROSE SPONGE CANDY.

4-lbs. White Sugar. 1 Large Egg.
1 Pint Water. Rose Flavouring.
Cochineal Colouring.

Process.—Exactly as described in last, flavour and colour alone differing. This sponge candy process requires expertness, everything must be ready at hand. When the boil commences to rise the second time, the pan must be lifted at once and emptied or it will not run out. It must not be poured out at first rise or it will become flat on the slab. A beginner should not attempt sponge candies until he has had some experience.

CANDIES VARIOUS.

Fruits, green, dried, or preserved, almonds and nuts of almost every description, as well as flavours and colours of a pleasant taste and pretty hue may be used in making candies. The process is exactly the same, the ingredients can be arranged to suit the fancy of the maker and the palate of his customers. The field to select variety from seems inexhaustable, so that new goods of this class could be introduced *ad. lib.* No good purpose could be served by giving a procession of these simple instructions, when, with a little thought and judgement, anyone could invent a new candy for themselves. It might be as well to add that a little glucose or cream of tartar added will make the candies softer and may be used, if preferred, in each formula in the proportion of 2-lbs. glucose or a teaspoonful of cream of tartar to every 10-lbs. sugar.

DROPS.

BARLEY SUGAR DROPS.

14-lbs. White Sugar.
3-lbs. Glucose.
¼-oz. Oil of Lemon.
Saffron Colouring.

PROCESS.—Put the sugar and water in the pan, place it on the fire, giving it an occasionl stir till sugar is disolved, then add the glucose or ½-oz. cream of tartar—either will do, but do not use *both*; place the cover on the pan and let it boil for 10 minutes or so (the cover is put on to steam the sides of the pan and keep it clean and free from granulation); take off the cover and put in the thermometer, immersing the bottom part in the boiling liquid; let the whole boil until it reaches the degree of crack, 300; tinge with saffron; then pour the contents on pouring plate, which has been previously oiled; sprinkle a few drops oil of lemon over it; turn in the edges as it begins to cool; then turn it over; knead it up as soon as you can handle it; if it is on a cold slab, you must be pretty smart or it will get too hard; as soon as it gets stiff enough cut off small convenient pieces and pass through barley sugar drop machine; when cold, break up; give them a good shake in a rough sieve to free them from machine scraps; the drops are then ready for bottling. Powdered sugar is not usually mixed with these drops.

PEAR DROPS.

14-lbs. White Sugar.
3-lbs. Glucose.
¼-oz. Essence of Pear.
1-oz. Tartaric Acid.
2 Quarts Water.
Cochineal Paste.

PROCESS.—Disolve the sugar in the water, add the glucose, and bring the whole to the degree of crack, 310; pour the contents on the slab; rub in a little cochineal paste in one corner of the boil to colour light pink; turn up the edges; add the powdered acid in a little heap; pour over the acid the pear essence, and thoroughly mix through the entire mass by kneading; when the batch is stiff enough cut off in small pieces and pass through the pear drop rollers; when cold, sift and mix some icing sugar amongst them, weigh, and bottle.

RASPBERRY DROPS.

14-lbs. White Sugar.
2 Quarts. Water.
3-lbs. Glucose.
½-oz. Essence Raspberry.
1-oz. Tartaric Acid.
Cherry Paste Colouring.

Process.—Melt the sugar in the water; add the glucose and boil the whole up to crack; pour the boil on a cold slab; rub in a little of the cherry paste to colour; turn up the edges; put in the powdered acid in a little heap; pour over the acid the raspberry flavour, and knead up the batch till thoroughly mixed and fit for machine; cut off in pieces and pass through raspberry rollers; sift, dust, and bottle when cold.

CHOCOLATE NIBS.

14-lbs. Sugar.
3-lbs. Glucose
1-lb. Pure Cocoa.
2 Quarts. Water.
Chocolate Colouring.

Process.—Melt the sugar in the water and bring the syrup to the boil; add glucose, then put cover on for ten minutes; now put in thermometer and boil to crack; pour out on oiled slab; spread the pure cocoa in small pieces over the boil: add a little colour; mix and knead the whole till stiff; cut off in small pieces and pass through machine; break up and sift when cold,

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ALMOND TABLETS.

14-lbs. Brown Sugar
3-lbs. Glucose.
2-lbs. Sicily Almonds, chopped.
4 Pints Water.
Lemon Flavouring.

Process.—Boil the sugar, glucose, and water as directed to the degree of crack; pour the boil on oiled plate; sprinkle the almonds over it with a few drops of oil of lemon; knead the whole together till stiff; cut off small pieces and pass through tablet rollers.

PINE APPLE DROPS.

14-lbs. White Sugar.
3-lbs Glucose.
4 Pints Water.
1-oz. Acid Tartar.
Saffron Colouring.
¼-oz. Essence Pine Apple.

Process.—Boil the sugar, glucose, and water as before directed to the degree of crack, 310; liquid saffron may be added to the boil in pan, or

saffron paste, after it has been poured out on slab—when on the slab put in the acid and essence of pine apple; knead the whole together; when stiff enough, cut off in pieces and pass through Pine Apple rollers.

COCOANUT TABLETS.

14-lbs. White Sugar.
3-lbs. Glucose.
1-lb. Desiccated Cocoanut.
4 Pints Water.

Process.—Boil the sugar, water, and glucose to the degree of crack; pour on slab and sprinkle the desiccated cocoanut over the boil; flavour with lemon; mix up and pass through tablet rollers.

ACID DROPS AND TABLETS.

14-lbs. Best White Sugar.
¾-oz. Cream of Tartar.
4 Pints Water.
4-oz. Tartaric Acid.
Lemon Flavouring.

Process.—Put the sugar and water in clean bright pan and bring to the boil; add the cream of tartar; place the lid on the pan and boil for ten minutes; remove the cover and put in thermometer, boiling quickly on sharp fire to the degree of crack; pour out at once on clean greased slab; when cool enough, turn up the edges and fold the boil over, then add the acid, which has been finely powdered, together with a few drops of lemon; knead up the whole until stiff and pass through drop or tablet rollers; break up when cold, dust with powdered sugar, weigh, and bottle. N.B.—We mean the term "white sugar" to include loaf, Dutch crush, granulated or crystal, any of these of good quality will answer the purpose.

BROWN COUGH DROPS.

14-lbs Brown Sugar.
3-lbs. Glucose.
3-oz. Acid, Tartaric.
½-oz. Oil of Aniseed.
¼-oz. Oil of Cloves.
¼-oz. Oil of Peppermint.
2-oz. Herb Horehound.
5 Pints Water.

Process.—First boil the herb horehound in the water for 10 minutes, then strain; add the liquor to the sugar and glucose, and boil as for other drops to crack, 310; pour on oiled slab; turn up edges and fold

in the boil, then put the tartaric acid in a little heap on the boil, and pour over it the aniseed, clove, and peppermint ; knead up the whole, thoroughly mixing the flavours until stiff enough to pass through machine cough drop rollers. N.B.—The Brown sugar should be of good boiling quality.

LIGHT COUGH DROPS.

14-lbs. White Sugar.	½-oz. Cough Drop Essence.
3-lbs. Glucose.	½-oz. Oil of Aniseed.
3-oz. Acid, Tartaric.	4 Pints Water.

Process.—Boil the sugar, glucose, and water as before directed to the degree of crack, 310 ; pour on greased slab ; first turn up the boil, then add powdered acid, cough drop essence, and oil of aniseed ; mix thoroughly until ready for machine, and pass through cough drop rollers ; break up, sift, and dust with powdered sugar. N.B.—We have almost said enough about plain machine drops ; they are practically all made alike, the colour, flavour, and shape alone differing. See list for colours and flavours ; the machine makers for rollers.

PULLED SUGARS.

There are a great variety of drops, rocks, &c., which look exceedingly pretty when well made, known as striped goods ; they are by no means difficult to make. Nevertheless they require practice and discretion to make a good job of them. The beginner must accustom himself first with making the plain toffees and drops before trying his hand with these goods, because they require greater expertness, more judgment, and a little experience with boiled sugar for all kinds of striped work. It is necessary that some part of the boiling at least must be pulled, that is by cutting off a part of the boil while hot, throw it over a hook, pull it out and keep throwing it over and over again, taking a fresh hold of it every time. The sugar by this action will gradually assume a white-satin-like appearance, and become light and porous. The hook on which the sugar is pulled should be fixed firmly against the wall near the pouring plate, about five feet or so from the ground ; it should be large, taking a sweep of 10 or 12 inches. Where only a small trade is done, a good 10 in. nail may answer the purpose. The fine colour

and appearance of the sugar, after pulling, depends upon the quickness of the operator. Should the worker be a female, or even a male, who has not previously handled hot sugar, the process of pulling will make the hands very warm ; however, you must get used to that. Do not leave the sugar, simply dust a little dry flour on your hands and stick to it till finished, the hands very soon get accustomed to the heat. Should you not be successful the first few times, do not be discouraged, as only practice and perseverance can make you overcome this difficulty. When you have succeeded, you may almost say you are master of the situation. In making your first experiment in stripping, do so with drops, as, if they are not striped in an artistic manner after being passed through the machine, they will not show the defects. After a little practice with the drops, you may then commence rock making in variety, always keeping in mind—" Rome was not built in a day." Perhaps it would be as well for me to note here that customers in the different parts must not expect to find the same names applied to the same goods as they are in the habit of seeing or selling ; every district has got its speciality. Nevertheless, the different recipes for the sweets given in this work are those usually sold in London by that name, and customers residing in different parts may re-christen them to suit the locality they are to be sold in.

PEPPERMINT ROCK.

8-lbs. White Sugar.
2-lbs. Glucose.
3 Pints Water.
Peppermint Flavouring.

Process.—Mix the sugar with the water, place the pan on the fire, add glucose and boil to weak crack, 300 ; pour the batch on oiled slab, add the flavouring, turn up the edges and mix in, then commence to draw the boil out ; double it up and pull out again, repeating this process on the slab a few times till the sugar gets a little tough, then throw the lot over the hook and pull until it becomes white and spongy ; a tinge of blue before pulling will improve the colour ; remove the boil to the slab and roll out into sticks 1½ inch thick ; when cold, chop in lengths to fit size of bottles or tins in which it is to be packed.

PINE APPLE ROCK.

8-lbs. White Sugar.
2-lbs. Glucose.
3 Pints Water.
1 oz. Powdered Acid, Tartaric.
Pine Apple Flavouring.
Yellow Paste Colouring.

Process.—Boil the sugar, glucose, and water to a weak crack, 300 ; pour on slab ; add the acid, flavouring and colouring ; mix up the whole, then cut off about one third and pull it over the hook until a bright yellow and spongy ; now remove it to the slab ; spread out the other part of the boil ; lay the pulled portion in the centre, casing it all round with the clear sugar, and roll the whole round on the slab, pulling it out lengthways until the desired thickness. In some places this rock is pressed into iron moulds, the shape of a pine apple, in others left in sticks round or oval, two or three inches thick, to be chopped up and sold by weight.

SHERBET STICKS.

8-lbs. White Sugar.
2-lbs. Glucose.
3 Pints Water.
1½-oz. Powdered Acid, Tartaric.
1-oz. Bi-carbonate of Soda.

Process.—Boil the sugar, glucose, and water to a weak crack, 300 ; pour on oiled slab ; turn up the edges ; fold in the boil, then add the acid and soda with a pinch of blue ; thoroughly incorporate the whole together ; when tough enough to handle, throw the batch over the hook and pull until white and spongy ; remove the mass to the slab, roll out into sticks the required thickness ; when cold, snip into lengths for farthing or half-penny.

ROSE ROCK.

8-lbs. White Sugar.
2-lbs. Glucose.
3 Pints Water.
2-oz. Acid, Tartaric.
6 Drops Otto of Rose.
Cherry-Red Colouring

Process.—Melt the sugar in the water, add the glucose, and boil to weak crack, 300 ; pour out on oiled slab ; rub in sufficient colour to give a deep rose tint ; add the acid and otto of rose ; thoroughly mix the whole, then cut off one third of the boil, pull over the hook till it becomes a light satiny pink, now spread out the clear portion on the slab, put the pulled in the centre and case it nicely round, rolling the whole down to desired thickness ; when cold, snip with scissors into required lengths.

PLAITED ROCK.

8-lbs. White Sugar. 3 Pints Water.
2-lbs. Glucose. ¼-oz. Essence of Pepperment.

Process.—Boil the sugar, water, and glucose in the usual way, to the weak crack, 300; pour on an oiled slab; add the flavour and mix up till stiffish, then pull the mass over the hook until it becomes a spongy heap; remove it to the slab, roll and pull out in rods about ½-inch thick; cut into equal lengths; take hold of three and plait with the fingers, while the sugar is still pliable. It is advisable to keep the bulk of the boil on a piece of hard wood during the process, unless assistance is at hand to do the plaiting, the sugar keeps longer soft and pliable on wood.

IMITATION CHOCOLATE CREAM STICKS.

8-lbs. White Sugar. 3 Pints Water.
2-lbs. glucose. 1-oz. Tartaric Acid.
Vanilla Flavouring.

Process.—Place the pan containing the sugar and water on the fire, stir in the glucose and bring the lot to the degree of weak crack, 300; pour on the slab, turn up the edges, fold over the boil, and add the acid and vanilla; when thoroughly mixed and stiff enough to handle, then pull over the hook until glossy white; remove it to the slab and roll out into rods about ½-inch thick; when cold, snip off into short equal lengths and dip them in melted chocolate paste, composed of ½-lb. pure block cocoa, ½-lb. ground sugar, and 3-oz. of lard or cocoa butter (no water). Melt these ingredients in a vessel by standing it on the hot furnace plate (not too near the fire), stir until all is dissolved and incorporated, then dip in the sticks into this mixture singly, taking them out immediately and lay them on wire frames to dry.

CHOCOLATE COCOANUT STICKS.

8-lbs. White Sugar. 3 Pints Water.
2-lbs. Glucose. 4-oz. Pure Cocoa.
Desiccated Cocoanut.

Process.—Boil the sugar, water, and glucose as directed to the degree of weak crack, 300; pour on oiled slab; cut off one third for pulling;

add to the other two thirds the pure cocoa and mix it in ; pull the smaller piece over the hook until white and glossy ; spread out the solid sugar and lay the pulled in centre, casing it round evenly, then roll into sticks 1-inch thick ; when cold, snip off into lengths ; make a thin solution of gum or gelatine, wet the surface of each stick and roll them in desiccated cocoanut ; when dry, they are ready for sale.

IMITATION ALMONDS.

10 lbs. White Sugar. 3 Pints Water.
2 lbs Glucose. Cocoa Powder.
Almond Flavouring.

Process.—Boil the sugar and water and glucose in the usual way to a weak crack, pour it on an oiled slab, add the flavouring, and mix up the batch until it gets stiffish, then pull over the hook until white and spongy, return it to the slab, cut up into convenient pieces, and pass through almond rollers ; when sifted, damp them slightly with a thin solution of gum or gelatine and mix them up amongst cocoa powder until they take a thin brown coating ; sift again ; they will dry in a short time and will then be ready for packing. Ground cocoa husks is also used for coating and is much cheaper than cocoa powder.

FARTHING AND HALFPENNY STICKS.

These goods are made in great variety of styles, colours and flavours, and look very pretty indeed when done by a clever workman, but there are many kinds which are simple enough to be attempted by a learner, the more artistic can be tried later on. We do not here attempt to even enumerate a tithe of the different samples which are on show, nor is it necessary for our purpose.

We select the more general and saleable kinds we meet with, which will be sufficient to give all the knowledge and practice necessary to enable the pupil to imitate all he sees or fancies ; at the same time we would suggest the exercise of a little of the inventive faculty, knowing what ample scope there is for it—anything between the modest looking acid stick to the elaborate tartan plaid arrangement will answer the purpose.

Beginners are generally fond of colours. This is a mistake. Care and discretion should be exercised, even in handling the ordinary

reds and yellows, the slightest tinge, in many cases, have the best effect, and no solid sugars should be coloured deep, except, perhaps, little pieces for stripes, blues, and greens, however harmless they may be, are never very popular. Use them only when necessary to give variety. In making striped goods, some part of the boil must be pulled over the hook; if the body is to be composed of plain sugar, then a small portion must be pulled to stripe with; if the body is to be of pulled sugar, then a small portion or portions must be cut from the boil and coloured rather deep to give contrast. Machines are made for making sticks in various shapes, but the majority, especially with small makers, are made by hand somewhat in the way we describe.

ACID STICKS.

CLEAR WHITE.

10-lbs. White Sugar.
2-oz Tartaric Acid.
½-oz. Cream of Tartar.
3 Pints Water.
Lemon Flavouring.

Process.—Put the sugar and water in a clear bright pan, add the cream of tartar, and boil up sharply to weak crack, 300 : pour the batch on oiled slab; turn in the edges, fold the boil over, then put in powdered acid with a few drops of lemon; knead the whole together; when it begins to get stiff, commence to roll the boil round on the slab, working one end down to a point: draw it out the required thickness, the full length of the plate, cut it off, then do another length likewise, repeating the operation till the the boil is worked up; keep the first pieces in shape by occasionally rolling them while the remainder of the boil is being pulled out and shaped. When the boil is finished and the sticks cold, snip them off in lengths with scissors. An assistant is very useful to keep the sticks in motion while the boil is belng worked off, or they may become flat.

PEPPERMINT STICKS.

DARK BROWN WITH LIGHT STRIPES.

8-lbs. Brown Sugar.
2-lbs. Glucose.
3 Pints Water.
Peppermint Flavour.

Process.—Bring the sugar, glucose, and water to the degree of crack in the usual way; pour the batch on an oiled slab; work in the flavour; cut off a piece about 1½-lb. from the boil and pull it over the hook

until light and satiny, then roll the pulled sugar out into a long stick, cut it into 6 pieces of equal length, and lay them on the solid boil longways and equal distances apart, then roll the boil into shape, bringing down one end to a point; pull out into convenient lengths, twisting them so that the stripes form a pretty spiral form round the stick. N.B.—For the stripes in this case, white sugar is often used and looks much better, but to do so two pans are necessary, one may be a small saucepan to boil two pounds. The white sugar is boiled separately in the ordinary way, otherwise process would be exactly as described.

LEMON STICKS.

PULLED YELLOW CENTRE WITH YELLOW CASE.

8-lbs. White Sugar.	3 Pints Water.
2-lbs. Glocuse.	Lemon Essence
	Yellow Paste Colour.

Process.—Boil the sugar, glucose, and water to weak crack; pour the batch on oiled slab; work in colour and flavour; cut off one third and pull over the hook until of a bright light yellow satiny appearance; remove it from the hook; spread out the plain sugar and lay the pulled in the centre; case it nicely all round with solid, then commence to roll; bring one end down to required thickness; pull out into sticks as long as convenient; when cold, snip to lengths required.

ORANGE STICKS.

PULLED WHITE BODY WITH ONE BROAD RED AND TWO NARROW ORANGE STRIPES.

8-lbs. White Sugar.	Red Colouring.
2-lbs. Glucose.	Oil of Orange.
3 Pints Water.	Tartaric Acid.

Process.—Boil the sugar, glucose, and water to the weak crack, 300; pour batch on oiled slab; cut off about one third of the boil; divide this third into two pieces; colour one part a deep red and the other a deep orange; mix in the colours quickly and stand them aside on a piece of wood in a warm place till wanted; now put the acid and flavouring into the larger portion of the boil and pull over the hook until white and spongy; remove it to the slab, then take the piece of red sugar and draw it out about 18 inches long and 2½ inches wide; lay

it down the centre of the pulled sugar, then take the piece of orange sugar and pull it out about 3 feet, half the thickness of the red, cut it in two and place one on each side of the red, about two inches from it, roll, twist, and pull out the recognised thickness; when cold, snip in lengths.

CINNAMON STICKS.

CLEAR PINK BODY, WITH FOUR NARROW WHITE STRIPES.

8-lbs. Sugar. 3 Pints Water.
2 lbs. Glucose. Cherry Paste Colour.
Cinnamon Flavour.

PROCESS.—Bring the sugar, glucose, and water to the crack and pour out; cut off a small piece and pull it white; colour the body light pink, add the flavour, prepare the four stripes as before directed, lay them on the clear sugar, equal distances apart, roll out in lengths, and snip off when cold.

CLOVE STICKS.

ALMOST TRANSPARENT, WITH A TINGE OF RED, STRIPED WITH WHITE AND RED STRIPES ALTERNATELY.

8-lbs. Sugar. 3 Pints Water.
2 lbs. Glucose. Cherry Paste.
Oil of Cloves.

PROCESS.—Boil the sugar, glucose, and water to 300; pour on oiled slab; cut off small portion, divide it into two; colour the one deep red; pull both the stripes and lay them alternately on the solid sugar; form the boil into a roll, bring down one end, usually the left hand, to a point; pull out in long lengths and twist; when cold, snip with scissors to size.

RASPBERRY STICKS.

PULLED WHITE CENTRE, CASED WITH RED AND STRIPED WITH SIX NARROW WHITE STRIPS.

8 lbs. White Sugar. 3 Pints Water.
2-lbs. Glucose. Cherry Red Paste.
Raspberry Essence.

PROCESS.—Boil the sugar, glucose, and water to weak crack, 300; pour the batch on plate; cut in half and colour the one half red, then flavour

both halves with essence (raspberry and a little tartaric acid) ; pull one half over the hook and cut off one third of it and lay it aside ; put the other two thirds in centre of the red solid sugar and case it round ; now lay the remaining piece of pulled sugar in 6 lengths of equal thickness and distances apart on the top of cased boil ; roll out the boil to required thickness, twist, and snip off into lengths when cold.

TWISTED BARLEY SUGAR STICKS.

HAND-MADE.

8 lbs. White Sugar.	3 Pints Water.
2 lbs. Glucose.	Lemon Flavour.
Saffron Colour.	

Process. – Put the sugar and water in a clean, bright pan and bring to a boil, then add the glucose ; put on the lid for 5 minutes ; continue boiling in the usual way till it reaches the crack, 300 ; now add sufficient liquid saffron to tinge a golden colour and pour the boil carefully over a smooth slab, so that the sheet of sugar will not be thicker than the eighth of an inch. When the sheets has partly set, cut it into strips one inch wide and the whole length of the sheet with scissors. Let an assistant take charge of the strips and twist them by taking hold of an end in each hand and turn them in opposite directions, forming a spiral column ; when cold, snip the sticks into required lengths and carefully weigh and bottle. To make these goods the operators must be very quick in their movements. The slab must be warm on which the sugar is poured, as the thin sticks cool so fast and get brittle.

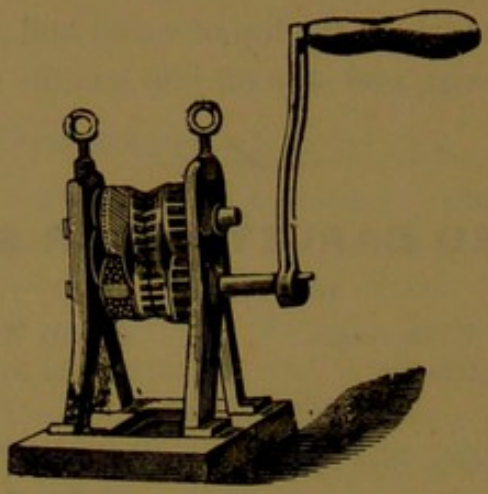
TWISTED BARLEY SUGAR STICKS.

MACHINE-MADE.

8 lbs. White Sugar.	3 Pints Water.
2 lbs. Glucose.	Oil of Lemon.
Saffron Colour.	

Process.—Proceed with the boil exactly as for last recipe ; when the sugar is on the pouring plate turn it up as if for drops, and when set enough, cut off pieces and pass them through barley sugar stick rollers. They come out three or four wide ; be careful and separate the sticks and mark them into lengths by pressing the edge with a piece of sheet

iron at equal distances while warm, so that when cold they will break up properly, otherwise there is a lot of little pieces, being very fragile.

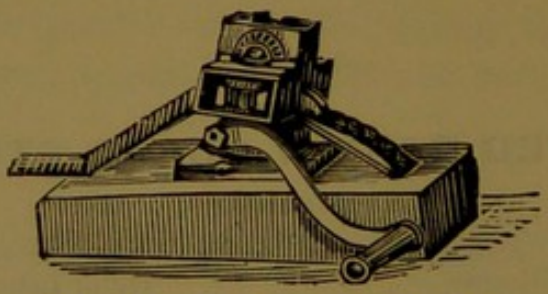


PLAIT AND ORNAMENTAL STICK MACHINE.

The above machine, is very useful to amateurs, and produces very pretty sticks, usually three sorts.

The boils may be either plain, pulled, or striped. A little discretion with colours and arrangements is all that is required to produce a really attractive variety. Any of the recipes given for sticks will answer for this machine. When the boil has been prepared on the slab, instead of pulling it out, cut it up in pieces and turn through the machine.

PEPPERMINT BULL'S EYES.



BULLS EYES' MACHINE,

FOUR CORNERED DROPS CUT AT ANGLES, BLACK WITH WHITE STRIPES.

8-lbs. Brown Sugar.	3 Pints Water.
2-lbs. Glucose.	Peppermint Flavour.

Process.—The process is exactly the same as for peppermint stick, viz:—Boil the sugar, water, and glucose to a weak crack, 300; pour the

boil on an oiled plate, flavour with peppermint and well work up; in a smaller pan, have two pounds of white sugar, with usual proportion of cream of tartar and water, boiled to the same degree; pull this over the hook until white and porous; remove it to the plate and work it down into lengths about one inch thick; lay them long ways on the solid boil, equal distances apart; make the whole boil into a thick roll, bringing one end down to a point; draw off as for half-penny sticks, but thicker, then with scissors snip them off in pieces about an inch long; hold the scissors in the right hand, the sugar in the left; every time you make a clip, turn the sugar half way round, so that the corners of each cushion will be at opposite angles.

N.B.—A machine is made for cutting Bull's Eyes, which does this work rapidly and satisfactorily. *See engraving.*

BULL'S EYES, VARIOUS.

The formulæ given for the different kinds of sugar sticks will answer for the variety of bulls eyes. The process and ingredients are precisely alike. The sticks may or may not be drawn out a little thicker, according to the size of the drop required. Cream of tartar may be substituted for glucose in all recipes given for boiled goods. The sugar is not boiled quite so high for hand goods or pulled sugars as it is for machine drops, being a little lower it works better, keeps longer pliable, and is less brittle when cold.

ROUND HAND-MADE BALLS.

8-lbs. Sugar.	3 Pints Water.
2-lbs. Glucose.	Flavour.
Colour.	

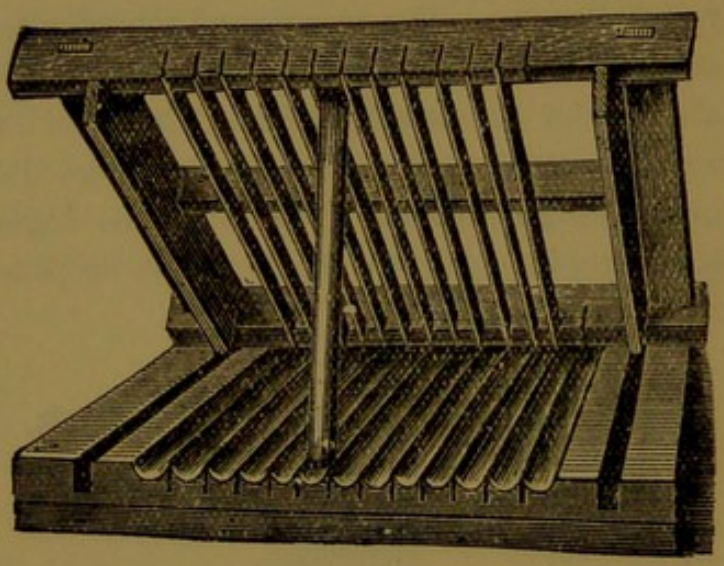
Process.—Boil the sugar, water, and glucose in the usual way to a weak crack, say 300; pour the boil on the slab; colour and flavour to taste; work the batch up until stiffish, then roll the boil round, getting one end down to a point as directed for sticks; pull it off in lengths of about three feet and about one inch thick, then, with scissors, snip off in pieces about one inch long and roll round with the hand. An expert assistant is necessary for this operation, as the balls must be shaped while hot, and kept on the move till cold.

This general recipe will apply to all hand-made balls. For details of pulling, striping, casing, and variety the reader is referred to the

various processes given for sticks and bull's eyes. They are all made and finished in this way. For small size, pull out the lengths thinner; for larger sizes, thicker.

To make the various striped balls nicely, requires practice and a good deal of it. No amount of book learning will teach those who are quite ignorant of sugar boiling, but at the same time, if the reader has mastered the simpler process at the beginning of the book, he is quite capable of understanding this and working out his own ideas in his own way, but "hand-made balls" should not be attempted until the learner feels confident he can manage a boil easily and quickly, because there is no time to think after the sugar is on the slab. The manipulation must now have been acquired to an extent, so as to enable the operator to proceed as if by instinct.

BALL ROLLING MACHINE.



ROUND BALLS.

MACHINE HAND-MADE.

This contradiction of terms is only intelligible to a confectioner. We mean to distinguish the goods made by this comparatively new invention to those shaped through the ordinary rollers. This machine makes them perfectly round, and even more uniform than can be accomplished by hand, even by the most expert. While balls made through rollers

are (I was going to say shapeless) however, they are anything but round, neither are they oval, oblong, or flat, still they are called balls for want of a better appellation.

The batch is prepared for the machine in the same way as for sticks; roll the stick to the exact thickness; cut them off the same length as the gauge pin; put six or seven sticks at the bottom of the apparatus, then bring down the top and commence by lightly pressing and rolling the top part backwards and forwards; then bear a little heavier, giving a clear long sweep, and finish with a quick short motion; empty the machine, and repeat the process until boil is finished.

CASED GOODS.

We have had a little to say about cased goods in giving directions for sticks and rocks, and those who have read the work so far will understand what is meant. The process is easy to a degree to simply case the sugar, but art is necessary to make a nice job of it. The proportions of pulled to solid requires judgment. The colouring of the solid sugar is important for effect. The opaque boil in the centre shows up every speck and defect, therefore, thorough mixing of sufficient good paste colour, to give the case a deep tinge, is necessary for a bright appearance. Flavour and acids should be worked in to both solid and pulled sugar. A pinch of blue will improve the white pulled sugar, taking away the yellow shade. Beginners should look at their goods when finished; the defects will suggest the cause. Nothing looks worse than sickly looking, half coloured, spotty cased drops. On the other hand, no goods are more brilliant and effective when well and carefully made.

ROSE BUDS.

8-lbs. White Sugar.
2-lbs. Glucose.
3 Pints Water.
Cherry Paste Colour.
5 or 6 Drops Otto of Roses.

Process.—Boil the sugar, glucose, and water to the degree of crack, 300; pour on an oiled slab; cut off about one third for pulling; colour the larger piece a deep red and flavour both with the otto of roses; pull the smaller piece over the hook till white; spread out the larger piece;

lay the pulled sugar in the middle, casing it carefully round; pass through small acid drop rollers. N.B.—Turn the boil on its edge every time you cut off a piece for machine, in order to keep the pulled sugar as near the centre as possible.

RIPE PEARS.

8-lbs. Sugar.
2-lbs. Glucose.
3 Pints Water.
Cherry Red.
Yellow Paste.
¼-oz. Essence Pear.
1 oz. Tartaric Acid.

Process.—Melt the sugar in the water, add the glucose, and boil to 305; pour on oiled slab; cut the batch into three equal parts; flavour with essence of pear, together with a little acid; colour one part deep red and one a deep yellow; pull the third portion over the hook, and lay it between the yellow and red pieces, so that one side would be yellow and the other a bright red; cut off into convenient sizes and pass through large pear drop rollers. These goods are sold either plain or crystalized.

MOTTO ROCK.

Had it not been for the many enquiries I have received from customers in reference to this class of goods, I would certainly have passed over "motto rock." I feel myself quite unable to give instructions clear enough to begin this, the most laborious task a sugar boiler has to undertake. There is no doubt that hand-made goods look much prettier than any that can be done by machines; on the other hand, there is just this to be said, that it would be impossible to compete, as far as prices are concerned, with the machine goods of the present day. By way of variety, it is very flattering to be able to decorate your shop and windows with some tasty stick or motto which will show the ability of a workman in such a striking degree. Nothing but practice, and a great deal of it, will ever make a proficient hand, but certainly patience and perseverance will overcome this as it will do almost everything else, therefore, I will give the process as plain as I can, in the hope that it will be found of practical assistance to those who aspire to be master of the branch. In the first place, see that your workshop is all in order, with everything at hand. Have your pouring plate warmed by two or

three previous boilings ; boil your sugar a little below crack, say 300 by the thermometer. When the boil is on the slab, see that you keep it all in a heap ; do not let the edges get hard, but keep turning them in ; pull the sugar directly it is cold enough to be handled. Colour the stripes, mixing the colour well in ; keep them in a warm place while working the boil ; turn them over occasionally, so that they may be kept moist all through. Should your stripes not stick when laying them on the boil, damp them slightly with a wet cloth. Suppose we wanted a boiling rock with the word LOVE running all through it, boil to just a little under the crack, 7-lbs. of good loaf sugar, with the usual quantity of cream of tartar. Pour it on a warm slab ; cover one half of the boiling red, and pull the other half over the hook ; if the slab be not very warm, lay both the red sugar and the pulled on a piece of hard wood, which will keep it moister than iron would, then cut off a small piece of red sugar, flatten it on the slab to cool, and harden it. With this piece of sugar form the letter L, and work the white pulled sugar (which is stiffer) all round this letter, keeping it in shape. When this is done stand it on one side ; take another piece of pulled sugar and roll it round about 1½ inch thick and case this all round with red sugar, and case again with white sugar over the red. This will give O ; put this aside also, and take another piece of red sugar and form the V, working the white pulled sugar all between and round it. Form the E in the same way, and when done lay them in order—LOVE—and put whatever quantity of white sugar you may have left round the word, and case the whole round with the remainder of red sugar. The letters for this quantity of sugar should be about 1½ inch high and in proportion ; roll the heap round, and bring one end down to a point and pull off the sticks the required thickness ; when chopped up in pieces the word will show, of course, all through the stick.

STAR ROCK OR ROCK VARIETIES.

There are many pretty assortments made in these rocks, and the perfection to which some workmen get them is something wonderful. It is nothing strange to notice the face of a watch, denoting some particular time of the day, staring from a bottle of these sweets, and even animals of all kinds, statues, and likenesses all follow in their turn, as

well as stars of various colours and shapes. They are all made in the same way as the example in the preceding recipe. My remarks may practically assist, but the learner, if he has only them to rely on, must depend greatly on his own judgment and tact.

BOILED SUGAR TOYS.

Iron moulds are made by confectioners' machinists for casting boiled sugar in. They may be had to turn out all kinds of figures, such as dogs, cats, elephants, &c. They are very popular among the children, and sell well in certain districts, and show a handsome profit. The moulds are generally made in two parts ; they must be well oiled ; the sugar boiled as for drops, fill the mould full, and just before the whole mass sets, pour as much of the sugar out as will run ; this will leave only a thin coating, which cling to the sides of the shapes, and will easily come out when the mould is parted, then you have the figure complete, but hollow. Boiled sugar whistles are made exactly the same way.

TO CRYSTALIZE BOILED SUGAR GOODS.

Several descriptions of boiled sugars are sold crystalized, which look very pretty and stand exposure to the atmosphere better. The process is very simple, and may be done with little trouble. When the drops have been made and set, break them up and sift them well in a course sieve ; now shake them over a pan which is boiling, so that they get damped by the steam, and throw them in a heap of crystal sugar ; mix them well up, so that the sugar adheres to the drops uniformly ; now sift them out of the sugar again, and they will dry in a few minutes and be ready for packing. Another method is, when the drops have been made and sifted, to have a thin solution of gum or gelatine and shake it over them and rub them altogether till damp all over ; now throw over them sufficient crystal sugar to coat them and mix them up ; when dry, sift again, weigh, and pack. N.B.—When being crystalized the goods should be warm, but not hot, or they will candy. Large French pears should be crystalized by the latter process, and be almost cold during the operation ; being bulky, they retain the heat a long time, and therefore have a greater tendency to grain.

IMITATION INDIAN CORN.

8-lbs. White Sugar — 3 Pints Water.
2-lbs. Glucose. — Lemon Flavour.
Yellow Colour.

Process.—Boil the sugar, glucose, and water to weak crack, 305 ; pour the boil on an oiled slab, flavour with lemon and colour it yellow ; cut this boil in two and pull one half over the hook ; roll the pulled half out in lengths about the size of a corn pod ; now put the plain yellow sugar through the Tom Thumb drop rollers, loosening the screws a little, and case the pulled sugar with sheets from the machine ; if done carefully, the result will be a good imitation of real Indian corn.

POP-CORN.

Pop-corn balls, bricks, cakes, &c., of various sizes are made from maize ; the species known as silver corn. The corn berries are shaken over a charcoal fire in a vessel known as a corn popper ; as they get hot, and the berries commence to burst, they must be kept continually in motion over the fire until the last grain has popped ; the popper is then emptied, and the process repeated with fresh corn berries until the desired quantity is finished, when they are ready for packing.

POP-CORN BALLS.

Roast the corn berries over a smokeless fire in a corn-popper ; keep shaking until every berry has burst ; boil sufficient sugar and water to the degree of feather, 245 ; add to each 7-lbs. of syrup, four ounces of disolved gum arabic ; wet the popped corn in this syrup, and roll them in fine pulverized sugar until coated all over, then lay them aside ; when dry, repeat the coating process in the same manner until they have taken up the desired thickness of sugar. Weigh or measure sufficient coated berries, according to size of ball required ; moisten them with thin syrup, partly from the ball by hand, then put it into a squeezer (something like a lemon squeezer), and press tightly into shape. N.B. —The corn berries may be coated in a comfit pan like other seeds or almonds, then form into balls in the usual way.

POP-CORN BRICKS.

Process.—The corn berries are prepared as for balls; boil brown sugar in the proportion of 8-lbs. sugar and 2-lbs. molasses to ball, 250; pour the syrup over the corn and thoroughly mix them; press them immediately into oiled tins. The process should be done quickly, and the seeds pressed as tightly as possible; when cold, they are ready for sale, and may be cut to size with sharp knife.

POP-CORN CAKES.

Process.—Prepare the corn as for balls, and pack them closely into strong square tins slightly oiled with olive oil of best quality; boil to crack, sufficient brown sugar and glucose for quantity required, and pour the hot syrup over the pop-corns, just enough to make them adhere. When cold, cut them up with sharp knife to size.

JAP NUGGETS.

These goods have become very popular, judging from the immense sale and conspicuous display amongst retailers. They belong to a class of goods in which there is ample scope for variety. It is doubtful whether any two makers use the same formula. However, the process is practically the same in every case. We give the reader a choice of three recipes, which work well, but he may vary the ingredients a little, so as to identify himself with a particular make, which he may run as a speciality. The quantities given are for a small pan boiled over a furnace.

JAP NUGGETS, No. 1.

2-lbs. White Sugar.	1½-lbs. Farina.
4-lbs Glucose.	2 Pints Water.
4-lbs. Desiccated Cocoannt, unsweetened.	Yellow Colouring.

Process.—Mix the ingredients in copper pan; boil on a slow fire to stiff ball, 250, stirring all the time; add colouring to fancy; when ready, pour carefully on an oiled plate, making the sheet about half an inch thick; when cold, dust with pulverized sugar, and cut up with sharp knife to size. N.B.—A few loose iron bars are useful to form a

square on the pouring plate, in proportion to size of boil, that the exact thickness of the sheet may be determined.

JAP NUGGETS, No. 2.

2-lbs. White Sugar.
4-lbs. Good Brown Sugar.
5-lbs. Desiccated Cocoanut.
7-lbs. Glucose.
2½-lbs. Farina.
3 Pints Water.

Process.—Put the sugar, glucose, and water in the pan ; place it on a slow fire ; stir in the cocoanut and farina, and boil to stiff ball, 255, keeping it well stirred. Pour on an oiled slab and cut up to size; when set and dust with powdered sugar. In large factories, where this sweetmeat is made, machinery plays an important part ; in fact, the manipulation is practically all done by mechanism. There is the desiccator for preparing the cocoanuts, the steam pans, which are fitted with beaters revolving inside, fixed with chains and weights for lifting them out, so that the pans may be emptied and cleaned without trouble ; also breaks for rolling out the sheets to size, and cutting machines which cut the nugget any size, the machine being so arranged that by simply altering a pawl on a ratchet wheel the size of the nugget is determined. Where this elaborate arrangement exists, our formulæ will neither be desirable nor necessary, nor do we pretend to suggest or advise. However, many tons are made in an ordinary boiling shop with the usual appliances and convenience, and it is to assist people thus situated is the principle object of this book.

JAP NUGGETS, No. 3.

4-lbs. Good Brown Sugar.
3½-lbs. Glucose
4-lbs. Desiccated Cocoanut, unsweetened.
2-lbs. Farina.
3 Pints Water.

Process.—As before, brown colouring should be used if required dark ; it makes the goods look richer ; when the boil is cut up the nuggets should be thrown into pulverized sugar.

BULGARIAN NOUGATS.

This sweatmeat, like Jap Nuggets, is made from a variety of formulæ, some excellent, and command a ready sale, while some very common

stuff is yended on barrows and hawked on trays at seaside resorts, as well as sold in small shops, principally owned by foreigners in poor neighbourhoods.

The latter is in most cases, to say the least of it, a mysterious conglomeration of questionable ingredients. However, we give recipes and instructions for a good wholesome sweet. It is, however, almost necessary to have steam machinery for this purpose, because the process is long and tedious. Small boilings would hardly pay to make, besides the risk of burning.

BULGARIAN NOUGAT, (No. 1. Common.)

28-lbs. White Sugar.
14-lbs. Glucose.
8-lbs. Almonds, blanched.
7-lbs. Gelatine.
12-lbs. Corn Flour.
2 Quarts Water.
½-oz. Essence Vanilla.
New Milk.

Process.—Mix the Corn Flour with sufficient New Milk to make it the consistency of Cream ; cover the gelatine with cold water, and let it remain in soak for twelve hours, or until quite soft ; put the gelatine in a steam pan and melt it, then add the Corn Flour and stir well until the whole is thoroughly amalgamated ; melt the sugar with 4-lbs. of the glucose in the water and boil in the usual way to the degree of crack ; remove the pan from the fire ; add the remainder of the glucose ; when the whole has partly cooled, pour it gently into the steam pan, at the same time stirring in the almonds, together with essence of Vanilla. When the entire boil has been thoroughly mixed, turn out the batch into deep moulds, which has been lined with thick wax or wafer paper. This nougat when cold and set is usually turned out in the block and cut up into bars when required. N.B.—The ingredients and method given in the above must be taken principally as a guide. There are so many different concoctions sold under this name that it would be impossible to give a definite formula.

BULGARIAN NOUGAT, (No. 2. Best.)

60-lbs. White Sugar.
14-lbs. Glucose.
14-lbs. Almonds, blanched.
14-lbs. Fondant Cream.
7-lbs. Gelatine.
Water.
1-oz. Essence Vanilla.

Process.—Cover the gelatine with cold water and let it soak until soft;

melt the sugar and glucose with four quarts of water, and boil in the usual way in a steam pan to a stiff ball ; then turn off the steam, add the gelatine, and stir until dissolved ; now turn the batch into the steam stirrer ; melt the fondant cream and mix it in together with the almonds and vanilla ; let the whole be well beat up for a couple of hours ; then pour the mass into moulds or boxes, lined with wafer paper ; when cold and set, it should be turned out and cut up into bars as required. By altering the colour and essence, variety may be made, such as raspberry, almond, &c.

NOUGATS, VARIOUS.

The making of French and other nougats is simply a mixing of almonds, honey, sugar, egg-whites, and other good things in various proportions, giving the whole a delicate flavour and appropriate colour. Steam is always preferable as a means of cooking. When a furnace is used for this purpose, the fire must be very slow and the mixing kept well stirred. The popular flavours are raspberry, vanilla, orange, and almond. The best colours and good fresh essences only should be used.

VANILLA NOUGATS (Best).

14-lbs. Sweet Almonds, blanched.
4-lbs. Best White Sugar.
3 Quarts Clear Honey.
24 Eggs—whites only.
2-lbs. Glucose.
1-oz. Essence of Vanilla.

Process.—Beat the egg-whites in machine to thick froth ; put the sugar, honey, and glucose into a bright clean pan and place it over a very slow fire ; keep stirring with wooden spatula for about two hours, until the mass gets thick ; then add the beaten egg-whites, and keep stirring until the mixing reaches the degree of stiff ball ; then put in the almonds and vanilla essence, stirring them well in the boil. Now remove the pan and pour out the contents on wafer paper, spreading it out a full inch thick ; then cover the top also with wafer paper and smooth the entire sheet level ; keep a flat board on top till cold and set; now remove the board and cut into bars ; wrap in wax paper and pack. This is an excellent sweetmeat when well made. For variety, use colour and flavour.

VANILLA NOUGAT (Common).

12-lbs. White Sugar. 4-lbs. Sweet Almonds, small.
3-lbs. Glucose. 3 Pints Water.
½-oz Essence of Vanilla.

Process.—Put the sugar, glucose, and water in a clean pan ; place it on a sharp fire, and stir till disolved ; then put on the cover and let it boil for five or six minutes ; now remove the lid and continue to boil to soft ball degree ; now pour the contents on a damp slab (one over which cold water has been sprinkled) ; when cool, take a long flat spatula and work the sugar about until it becomes white and creamy ; now add the almonds (which have been previously blanched and dryed), together with the vanilla essence ; keep working up the whole until of uniform consistency ; now spread the mass on wafer paper in sheets one inch thick ; cover the sheets with wafer paper, rolling the top smooth ; when set, cut into bars. Should the cream be a little thin, add some icing sugar when mixing ; if boiled properly, this is not required. Most cheap nougats now in the market are made more or less according to this formula, colour, and flavour differently for variety.

NOUGATINES.

4-lbs. Ground Almonds. 7-lbs. Castor Sugar.

Process.—Place the sugar in a bright pan over a moderate fire (without water) ; keep stirring until melted ; see that the sugar is well scraped down from edges, so that it gets all melted ; when it becomes a rich brown colour, sprinkle in the ground almonds ; now stir just sufficiently to keep the almonds off the bottom ; when the almonds are boiled in and thoroughly incorporated, remove the pan and pour contents on an oiled slab ; when cold enough to handle, turn the boil up as if for drops, and pass through a machine or snip off with scissors ; sift the nougatines, and cover them with a thin solution of gum, and throw them into heap of icing sugar, and mix them up till well coated ; now remove them to the drying room for twelve hours, then they are ready for packing.

CHOCOLATE NOUGATINES.

4-lbs. Ground Almonds. 7-lbs. Castor Sugar.

Process.—Exactly as the previous formula. When shaped through

rollers or by hand, the nougatines are dipped into melted chocolate (see chocolate for dipping), taken out with a fork, and spread on trays till dry. N.B.—Nougatines must in all cases be coated or they become damp in a few hours. When coated with icing sugar, it is also necessary to put them in a drying room for a day, or the coating will peel off.

ICE CREAM CONFECTIONERY.

This form of boiled sugars has been long in vogue in America, and has lately appeared in the windows of several of the London sweet shops, principally in the West End, and sell very freely. It may be made as follows :—Boil 7-lbs. of loaf sugar with three pints of water ; add a small teaspoonful of cream of tartar ; allow it to boil for ten minutes, then add one pound of fresh butter ; it will then commence to froth up, and care must be taken that the pan is large enough, as the syrup will occupy twice the space than if there had been no butter added ; boil this mixture to the degree of a very weak crack, or 285 by the thermometer, at which point it is done ; pour it on the slab, which has been, of course, previously greased. As soon as it begins to cool, turn it up and knead it until it gets stiff enough to pull over the hook. When on the hook pull it sharp until it gets as white as snow. This white is usually flavoured with vanilla or oil of lemon. It may be either pulled out in bars or left in the heap. It is very easy broken in small pieces for retail purposes. In the summer or hot weather keep this toffee from the air, or it will be inclined to be sticky. This eats very rich, and commands good sale at the best price.

RASPBERRY & STRAWBERRY ICE CREAM CONFECTIONERY.

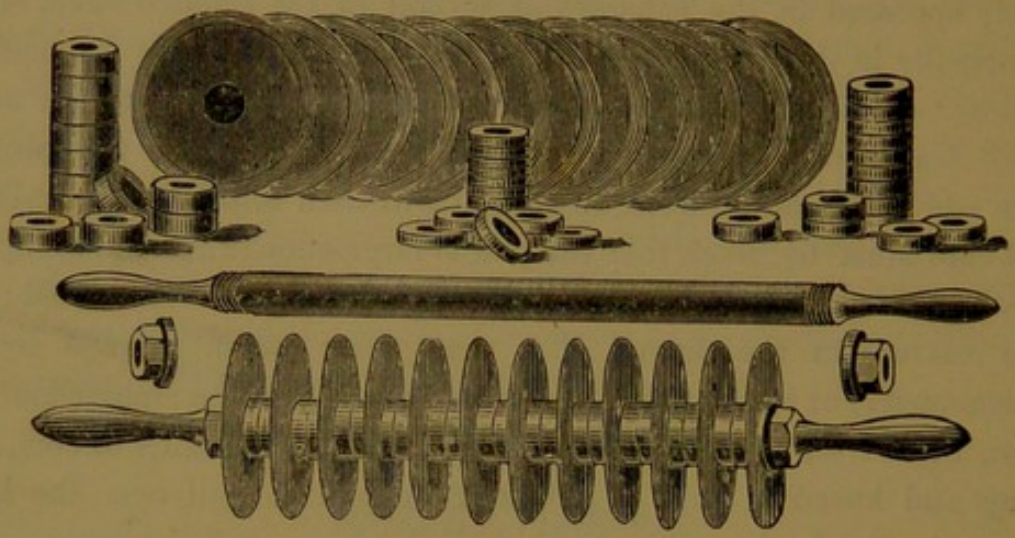
This is made exactly as the last, with the addition of a little red colour before the boiling is poured out, or it may be coloured on the slab ; add a little essence of raspberry or strawberry and a pinch of tartaric acid just before pulling the boil. Colour the raspberry a little deeper than the strawberry.

CHOCOLATE ICE CREAM.

To make chocolate ice cream, boil the same quantities as before,

precisely in the same way in every particular; when the sugar has been poured out, work well into it ½-lb. of powdered chocolate; knead this well up in order that the chocolate may be well mixed with the sugar; put in sufficient chocolate to give the boil a dark brown colour, otherwise it would be too light when pulled.

CARAMELS.



CARAMEL CUTTER.

When first brought over from America, these goods were certainly a treat. They were rather dear, but they *were* good; the public appreciated them. Very soon the demand was universal, then competition stepped in with the usual result—the prices lowered, the quality suffered, until anything cut to shape were called caramels. Consequently, the demand lessened; still they were forced on the market cheaper and cheaper, worse and worse, until only those who liked plenty for money bought the vile concoctions. The very name has almost become a synonym for rubbish. However, several makers have kept up the standard of excellence, so that only those which are identified by a particular brand or name find favour with the retail shopkeepers who study the interest of their customers, but the mischief has already been done to the great bulk of the general trade; the public has lost confidence, and are afraid to buy that which they would like, having so often got that which they *did not like*, bearing the same name and having the same appearance as their former favourites. To remedy this state of things as far as possible, we

recommend the making of an excellent article from good and fresh ingredients, using a distinctive name or brand, and, above all, keep the quality up to the standard. Better please old customers with prime goods than try to deceive new ones with cheap and common confectionery of this or even any class. The following formulæ make really good goods. For something very special, cream might be substituted for milk and the proportion of butter increased. Be careful to use best fresh butter and fresh milk or cream ; condensed milk, though, may be used when it is inconvenient to get new milk.

VANILLA CARAMELS.

8-lbs. White Sugar.
2-lbs. Glucose.
1-lb. Fresh Butter.
2 Tins Condensed Milk.
2 Pints Water.
Vanilla Flavouring.

Process.—Boil the sugar, glucose and water to the degree of ball, 250 ; remove the pan a little off the fire ; add the milk and butter, the latter cut into little pieces and well stir in with wooden spatula until the whole is thoroughly mixed, then gently bring the mass through the boil and pour out on greased slab, making sheet about ½ inch thick ; when set, cut with caramel cutter, and when cold, separate the squares and wrap in wax paper.

COCOANUT CARAMELS.

8-lbs. Sugar.
2-lbs. Glucose.
1-lb. Fresh Butter.
1½-lbs. Desiccated Cocoanut, unsweetened.
2 Tins Condensed Milk.
2 Pints Water.

Process.—Melt the sugar in the water ; add the glucose, and boil up to the ball, 250 ; remove the pan to side, then stir in the butter, milk, and cocoanut ; bring through the boil ; pour on oiled slab or in frames about ½-inch thick ; when set, mark with caramel cutter ; when cold, separate and wrap in wax paper.

RASPBERRY CARAMELS.

8-lbs. Sugar.
2-lbs. Glucose.
1-lb. Fresh Butter.
1-lb. Raspberry Pulp or Jam.
2 Tins Condensed Milk.
2 Pints Water.
Liquid Cochineal Colour.

Process.—Boil the sugar, glucose, and water to weak crack, 250 ;

remove pan to side of fire ; add the milk, butter (cut small) and jam ; stir the whole together, replacing the pan on the fire ; add sufficient colouring ; keep stirring all the time until the whole comes through the boil ; pour out ; mark when set, divide and wrap when cold.

WALNUT CARAMELS.

8-lbs. White Sugar.
2-lbs. Glucose.
1-lb. Fresh Butter.
1-lb. Shelled Walnuts, broken small.
2 Tins Condensed Milk.
2 Pints Water.
Saffron Colouring.

Process.—As above. Caramels require careful watching and a lot of stirring, the boil being liable to catch and flow over ; fire must not be too fierce ; when too hot, put an iron under one side of the pan to keep it up a little from the fire ; keep constantly on the stir after butter and flavouring ingredients are added.

CHOCOLATE CARAMELS.

8 lbs. Good Sugar.
2-lbs. Glucose.
1-lb. Fresh Butter.
½-lb. Pure Chocolate, unsweetened.
2 Tins Condensed Milk.
2 Pints Water.
Vanilla Flavouring.

Process.—When the sugar, glucose and water have boiled to the degree of ball, 250, and the milk, butter, and chocolate are all disolved and incorporated, bring gently through the boil, then pour out on oiled slab or in frames ; when set, mark deeply with caramel cutter ; when cold, separate with sharp knife and wrap in wax paper.

AMERICAN CARAMELS.

The following caramel recipes were sent the writer from America by a brother confectioner, who was and is employed in one of the best houses on the other side of the pond. They appeared in the fourth edition of the confectioners' hand-book, and were much appreciated at the time, but I am afraid in these degenerate days the luscious ingredients mentioned have been varied more or less according to the exegencies

of price. However, here they are, and for those who get a high price for a first-class article, they are well worth attention.

VANILLA CARAMELS, No. 1 Quality.

AMERICAN RECIPE.

6-lbs. Sugar.	1½-lbs. Fresh Butter.
2 Quarts Sweet Cream.	4-lbs. Glucose.
Essence of Vanilla.	

PROCESS.—Put the sugar, glucose, and cream in the pan; put it on a slow fire and stir constantly; let it boil to a stiff ball, then add the butter; keep stirring, when it has well boiled through, remove the pan from the fire; flavour with vanilla extract; pour out on oiled plate; mark when set with caramel cutter; when cold, divide with sharp knife and wrap each caramel in wax paper.

VANILLA CARAMELS, No. 2 Quality.

AMERICAN RECIPE.

5-lbs. Sugar.	½-oz. Cream of Tartar.
1-lb. Fresh Butter.	2 Pints Water.
3 Pints New Milk.	Vanilla Flavouring.

PROCESS.—Boil the sugar, milk, and water with the cream of tartar on a slow fire; stir all the time till it reaches a stiff ball; add the extract of vanilla and stir it in gently; remove the pan from the fire and pour contents on oiled slab; mark deep with caramel cutter when set; when cold, separate with sharp knife. These caramels should be a cream colour.

RASPBERRY AND STRAWBERRY CARAMELS.

THESE flavours may be used in either of the last two recipes, best quality according to the first, second quality as the second. Walnut, cocoanut, &c., may be added for other flavours.

MAPLE CARAMELS.

BY using pure maple sugar, maple caramels may be made precisely as

vanilla; the flavour of the maple sugar is sufficient without any artificial essence. These caramels will, of course, be dark.

CHOCOLATE CARAMELS, No. 1 Quality.

AMERICAN RECIPE.

6-lbs. Best Sugar.
4-lbs. Glucose.
2 Quarts Sweet Cream.
1½-lbs. Fresh Butter.
1½-lbs. Pure Chocolate, unsweetened.

Process.—Put the sugar and cream in the pan; stir it well together, then add the glucose; let it boil to a stiff ball; ease the pan off the fire a little and put in the butter in little pieces, then the chocolate; keep stirring altogether; bring the mass through the boil, then add extract of vanilla; remove the pan and pour contents on oiled slab, making the sheet about ½-inch thick; mark deep with caramel cutter when set; divide with sharp knife when cold, and wrap in wax paper.

CHOCOLATE CARAMELS, No. 2 Quality.

AMERICAN RECIPE.

5-lbs. Sugar.
¾-lb. Fresh Butter.
¾-lb. Pure Chocolate, unsweetened.
½-oz. Cream of Tartar.
1 Quart New Milk.

Process.—Melt the sugar in the milk; add the cream of tartar, and boil to the degree of ball; ease the pan a little off the fire and stir in the butter and chocolate; bring the whole to the boil; add extract of vanilla, then remove the pan and pour contents on the slab; mark and separate as directed in the last.

UNWRAPPED CARAMELS.

Caramels have usually been sold wrapped in wax paper. This is necessary when the goods are boiled very low and contain a large proportion of glucose. However, at the time of writing, we have had large consignments from America of unwrapped caramels, which are having a rare run. No doubt we shall see our home makers follow suit when the big demand is on the wane. Like the other caramels, the in-

gredients vary, but either of the American recipes will answer the purpose, provided the boil is brought up to weak crack, or the following will answer the purpose :—

7-lbs. White Sugar.
2-lbs. Glucose.
½-lb. Fresh Butter.
1 Tin Condensed Milk.
3 Pints Water.
Vanilla Flavouring.

Process.—Boil the sugar, glucose, and water to weak crack, 285 ; remove the pan from the fire ; add the butter and the milk ; stir in gently until dissolved ; add the flavouring just before the stirring is finished, then pour contents on oiled slab ; when cool enough, cut with caramel cutter ; if required crinkly on top, run over the sheet with a corded rolling pin just before cutting.

BURNT ALMONDS.

5-lbs. White Sugar.
2½-lbs. Sicily Almonds.
2 Pints Water.
Colours Various.
Flavours Various.

Process.—Boil the sugar and water in the pan ; as soon as it boils, add the almonds ; keep them off the bottom by stirring until the boil reaches the degree of ball ; remove the pan from the fire, then with the spatula or palette knife grain the boil by rubbing part of the syrup against the side of the pan until it gets thin and creamy, then stir all together until it gets into a powder ; now turn them into a coarse sieve, shake them well up, and part those that adhere, then divide the batch into three or four lots ; put one lot with its fair share of siftings into the pan, cover over the stove with a sheet of thin iron to break the heat, and put the pan on top of the iron ; the siftings will gradually dissolve and adhere to the almonds, which will become crisp when done (which you can tell by tasting) ; turn them out and serve the remainder in the same manner. They are often sold finished in this way, but in that case when the almonds have been put in the pan the second time each lot should be coloured and flavoured differently, then mixed. If required crinkly, boil in another pan to the high crack, 315, five pounds of white sugar ; put the almonds back in the pan (which must have been cleaned) ; pour over them this syrup in two lots, stirring them each time ; in the latter case, colour the syrup for variety.

PRALINES SATINE.

These beautiful sweets are very popular. They are pleasing both to the eye and the palate when well made, but they must be kept air-tight or they soon loose all their attractiveness and become a sticky mass, as they have a great tendency to "sweat." In order to prevent this as much as possible, it is advisable to use a little borax in each boil. The process is simple enough, but it must be worked quickly, in fact, the beauty depends on the rapid manipulation of the sugar over the hook; keep the eye fixed on the colour; as soon as it becomes like a glossy satin with a close grain it is finished; lift it off the hook immediately and return it to the slab for casing; do not carry on the pulling operation till it becomes spongy, and be careful not to use to much colour; the tints should be light and delicate when the goods are finished. Machines are made for cutting pralines. Some are shaped and worked like a pennet machine, others consist of two frames, each fitted with knives, hinged at one end so that the top frame is lifted; then the length of praline stick is laid along the bottom one; the top one is then brought down until the knives touch the stick, then pressed gently until the stick is cut through, closing the ends and encasing the soft centre; the motion must not be sharp, or it will chop off the pralines, leaving the ends open.

VANILLA PRALINES.

7-lbs. Best White Sugar.
2-lbs. Fondant Paste.
1-lb. Desiccated Cocoanut, fine.
1 Teaspoonful Cream of Tartar.
1 Quart Water.
Borax.
Green Colour.

Process.—Put the sugar, water, and cream of tartar in the boiling pan and boil up to crack, 310, in the ordinary way; while the pan is on the fire, take the fondant paste and work into it the desiccated cocoanut, with a little essence of vanilla, and lay it aside till required. When the boil has reached the required degree pour the sugar on the slab; colour it a light green, and, when partly cool, pull over the hook until it becomes a delicate satin tint; return it to the slab, press the boil out, lay the fondant paste in the centre, and case it all round with the pulled sugar; now carefully work the one end of the boil down to a point as for sticks and draw it out in lengths the required thickness;

lay them on the machine and press gently until cut through ; the pralines are then ready for packing. It is advisable to work small boils of these goods, as the casing being boiled high soon gets brittle ; keep turning the bulk round on the plate so as to keep the fondant paste exactly in the centre.

RASPBERRY COCOANUT PRALINES.

7-lbs. Best White Sugar.
2-lbs. Fondant Paste.
1-lb. Desiccated Cocoanut.
1-lb. Raspberry Jam, boiled stiff.
1 Teaspoonful Cream of Tartar.
1 Quart Water.
Carmine Colour.
Borax.

Process.—Work the jam and cocoanut into the fondant paste ; boil the sugar, water, and cream of tartar to crack ; pour it on an oiled slab ; colour a light rose tint ; when partly cool, pull and work off as in the preceeding recipe.

BLACK CURRANT PRALINES.

7-lbs. White Sugar.
2-lbs. Fondant Paste.
1-lb. Black Currant Jam.
½-oz. Tartaric Acid.
1 Teaspoonful Cream of Tartar.
1 Quart Water.
Borax.
Purple Colour.

Process.—Work the jam, acid, and colour into the fondant paste ; boil the sugar, water, and cream of tartar to crack, and work off as already described.

COCOANUT PRALINES.

7-lbs. Sugar.
2-lbs. Fondant Paste.
1-lb. Desiccated Cocoanut.
1 Teaspoonful Cream of Tartar.
1 Quart Water with Borax.
Lemon Flavour.
Yellow Colour.

Process.—As usual. Pralines of any sort or flavour may be made by following the directions given and substituting different essences, jams, chopped nuts, or almonds and colour to fancy.

CREAM BARS, &c.

This class of boiled sugars has become very popular. We see them displayed in every variety in large as well as in small establishments. We

have very often seen simply grained sugar exposed labelled creams. This is a silly attempt at deception, alike dishonourable to the seller and deterimental to the trade. When the public ask for cream, they expect a soft, mellow, delicately flavoured article, which only requires bruising with the tongue in order to gain the full flavour with a substance which dissolves almost instantly. What a disappointment when the customer finds they have got a hard flavourless lump of almost dry sugar, or a chalky mixture as hard as a bullet. There is certainly a little more trouble to make creams than candies, but that is no reason why one should be sold for the other. The process for the different sorts is exactly the same, the colours, flavours, and arrangements alone differing, which observation will at once teach the learner what is necessary. We take it for granted that those who use the book require rather the key to the different kinds of goods, with instructions how to make the leading articles, than a list of repetitions, which a grain of sense and a moment's reflection would render unnecessary. Besides, we want something new always in the business. We have given methods for every class, and the reader will be dull indeed, if after a little practice, he cannot suggest something which will be new to the trade. Some people are lucky enough to strike oil in this way. It may just be mentioned that large and expensive machines are made for creaming sugar, particulars of which will be gladly supplied by the trade machinists. They are used by large chocolate houses, as well as the leading confectioners, but the details of which would be a little beyond the purposes of this book.

VANILLA CREAM BARS.

7-lbs. White Sugar.
2-lbs. Glucose. = 22½
3 Pints Water.
Vanilla Flavour.

Process.—Dissolve the sugar with the water in a clean pan; add the glucose and boil in the usual way to the degree of feather, 243; pour the contents on a damp slab; let it remain a few minutes to cool; then, with a palette knife or wooden spatula, work it up to a white cream, adding a tint of blue to bleach it; when the whole has become a smooth cream, return it to the pan and melt it just sufficient that it may pour out smooth and level; stir in the flavour and run on pouring plate on a sheet ½-inch thick; when set, cut into bars.

RASPBERRY OR ROSE CREAM BARS.

7-lbs. White Sugar.
2-lbs. Glucose.
3 Pints Water.
Raspberry or Rose Flavour.

Process.—Melt the sugar in the water, add the glucose and boil to 243 ; pour contents on slab, and when cool, divide the boil into three parts ; colour one part red, add some pure chocolate to another, and to a third part add a pinch of blue ; cream each part by rubbing on slab to a smooth paste ; in rubbing in the pure chocolate, see that you have enough to make it a rich brown ; for the red portion use just sufficient to give a light red rose pink. When all finished, melt each portion separately in the pan just sufficiently soft to run to a level surface ; pour out first the red, then the chocolate on top of red sheet, then the white on top of chocolate ; this will make a cream cake to cut up into bars. Some do not take the trouble to melt the cream, being satisfied to spread the paste out, smoothing it on the top with palette knife ; this answers the purpose, but does not look so well.

COCOANUT CREAM.

7-lbs. White Sugar.
2-lbs. Glucose.
3-lbs. Cocoanut, peeled and sliced.
3 Pints Water.
Red Colouring.

Process.—Boil the sugar, glucose, and water in the usual way to the degree 245 ; pour contents on slab ; divide the boil into two lots ; when cool, colour the one part light pink and put a small touch of blue in the other ; add the sliced cocoanut, half into each part, then commence to cream them by rubbing. When both parts have been mixed up into a smooth paste, it is ready for sale, being usually sold by cutting from the rough block. N.B.—Cut almonds, ground walnuts, &c., are used in the same way as directed for cocoanuts. The boils may or may not be flavoured, but a little improves it and makes it fragrant.

CRYSTALIZED COCOANUT CHIPS.

Process.—Shave off the dark skin from a quantity of cocoanuts ; cut them up in slices with a spokeshave or cocoanut machine. Bring to the boil a sufficient quantity of sugar, with the usual proportions of

water; add the cocoanut slices and allow the whole to boil, for say ten minutes, or until the sugar comes to a soft ball, keeping it stirred all the time; remove the pan from the fire and empty the contents into a coarse sieve which has been placed over a vessel to catch the syrup which will run off the chips. Immediately the chips are drained, turn them amongst a heap of fine crystal sugar and mix them up; in an hour's time, they will be ready to sift out. Prepare another quantity in the same manner, but have the crystalized sugar coloured red (which may be done by pouring on a heap some liquid cochineal or carmine, and mixing it all through with the hands); when the second quantity of chips has been boiled and strained as last, turn them amongst the red sugar and mix them up directly; be careful the chips are not allowed to drain too long, or they will be too dry to take on the crystal; when sifted out of the crystal sugar, mix the white and red together. Cocoanut chips should be kept open to the air, keeping them in covered boxes or in show glasses; with the lids on they become sour in time. This method is a ready way, but is only suitable for retail purposes or quick wholesale trade. For best quality see next recipe.

CRYSTALIZED COCOANUT CHIPS.

BEST QUALITY.

Process.—Prepare the cocoanuts by paring off the brown skin; cut them in thin slices and pack them in a crystalizing tin (see tools and materials used for making liqueurs, &c.); boil sufficient sugar in the ordinary way to make syrup, enough to cover them, to the degree of thread; pour this syrup over them while hot and stand aside for twelve hours, then drain off the superfluous syrup by removing the cork from the tin; spread the chips on trays and put them in the drying room for two or three days, turning them over at intervals; when dry, put them again in the tin; boil a like quantity of syrup as before and let it stand till nearly cold; then pour it over the chips and let them remain undisturbed for another twelve hours; then strain again and spread them on trays; when dry, they are ready for sale or packing. These, of course, will be white. To make the red chips, simply colour the syrup which is used for crystalizing.

SUGAR CANDY, PINK and WHITE.

Sugar candy is made in a variety of colours. The foreign, which is imported in large quantities, varying in shades between very dark brown and pale yellow, the prices charged for these qualities being very little above the sugar value, therefore unprofitable to make, but the pink and white candy is not so common, and generally command a remunerative figure, besides being attractive as a window decoration. The process is simple and interesting. Copper pans are sold by machinists for the purpose, but for small makers a rough copper or white metal pan will answer, so long as its sides are a little wider at the top than the bottom, in order that the crystalized sugar may fall out unbroken. Perforate the pan with small holes, about three inches apart, pass a thread through from one hole to another, so that the thread runs at equal distances through the centre of the pan, then stop up the holes from the outside with a thin coating of beeswax and resin to keep the syrup from running through.

When the pan has been got ready, boil sufficient sugar to fill it, in the proportion of 7-lbs. sugar to 3 pints of water, to the degree of thread, or 230 ; then pour the contents into the pan and stand it in the drying room for three or four days ; when the crystals are heavy enough, which you can tell by examining them, pour off the superfluous syrup ; rinse the candy in lukewarm water and stand it in the drying room till dry. To make the pink, of course, colour the syrup, but be careful in tinging it very lightly. N.B.—When goods are undergoing the process of crystalizing, the vessel in which they are must not be disturbed.

CHRISTMAS PUDDING (Imitation).

7-lbs. White Sugar.	½-lb. Mixed Peel.
1-lb. Raisins.	½-lb. Sweet Almonds, blanched & chopped.
1-lb. Currants.	1-oz. Mixed Spice.
1-lb. Sultanas.	2 Pints Water.

Process.—Prepare the fruit by washing the currants in cold water, afterwards drying them ; stone the raisins ; blanch and chop the almonds ; cut the peel in strips, then mix them together, adding the spice ; boil the sugar and water to ball degree ; remove the pan from the fire ; grain the boil by rubbing the syrup against the side of the pan in the usual way ; when it becomes creamy, add the mixed fruit, care-

fully stirring the whole till thoroughly incorporated; have some wet cloths ready, into which divide the boil; tie them very tight and hang them up until set hard. The blanched almonds are used to represent suet and should be chopped accordingly.

BROWN CREAM PUDDING.

7-lbs. Brown Sugar.
2-lbs. Glucose.
1-lb. Currants.
½-lb. Sultanas.
½-lb. Raisins.
½-lb. Mixed Peel.
½-oz. Mixed Spice.
2 Pints Water.

Process.—Dissolve the sugar in the water, put the pan on the fire, and add the glucose; let the whole boil to a stiff ball, then pour the contents on a damp pouring plate; when nearly cold, commence to cream the boil by rubbing and working it about on the slab with palette knife or spatula until it becomes opaque, stiff, and creamy. Have the fruits prepared and mixed as in previous recipe, then work them into the boil with spatula; now divide the boil into small basins, holding about one pound each; press the cream well down and let them remain till set. Take them out, brush over them a thin solution of gum, and dust them with powdered sugar to represent frosting. Before putting the cream in the basins, shake over the basins a little icing sugar, it will keep them from sticking.

CANDIED NUTS.

Take any quantity of nut kernels, filberts, walnuts, Brazil nuts, or almonds, as preferred. Boil sufficient sugar with the usual proportions of cream of tartar and water, as for drops, to the degree of weak crack, say 300 by thermometer; remove the pan from the fire and drop in the kernels, a few at a time; lift them out with a long fork; lay them on tins or a cold iron pouring plate till set, when they are ready for sale. Many prefer to roast the kernels before candying, but this is a matter of taste.

NOYEAU.

Raspberry noyeau is the kind usually made and kept in stock by confectioners. There are several ways of making it. We give two, which

are, perhaps, the more recognised methods, but would suggest variety, such as pineapple, greengage, strawberry, black currant, &c. The only difference in the process would be the substitution of the different fruits and colours. The proportions would be the same, and the process exactly as for raspberry noyeau. There is a wide field to choose from in this department, and no lack of good things, which can be easily incorporated to give novelty, both in appearance and flavour.

RASPBERRY NOYEAU.

OLD METHOD.

1-lb. Gum Arabic.
2 Pints Water.
2-lbs. Raspberry Jam.
1-lb. Blanched Almonds.
Powdered Sugar.
Liquid Carmine Colouring.

Process.—Put the gum in a vessel; make the water hot and pour over it; let the gum remain in soak, with an occasional stir, until dissolved, then strain; put the mucilage in the boiling pan; stand it over a slow fire; add the blanched almonds and jam, and let it simmer for 15 minutes; have some powdered sugar on the slab; make a bay in the centre, into which pour the boil, then commence to work in sufficient of the sugar to form a stiff paste, adding colour enough to make the batch a deep red; roll the paste into a sheet, about 1 inch thick; put wafer paper top and bottom, and cut it into bars with a sharp knife.

RASPBERRY NOYEAU, No. 2.

5-lbs. White Sugar.
1-lb. Glucose.
2-lbs. Raspberry Jam.
1-lb. Almonds, blanched and dried.
3 Pints Water.
Liquid Cochineal.

Process.—Boil the sugar, glucose, and water to the ball degree, 250; ease the pan off the fire; add the jam and almonds, with sufficient colour to make the whole a bright red; let the batch boil through, keeping it gently stirred until thoroughly mixed; now remove the pan from the fire and see if the batch has turned opaque; if not, rub some of the syrup against the side of the pan, and stir in until the whole boil shows a little creamy, then pour out on wafer paper, keeping the sheet about three quarters of an inch thick; level the top down with palette knife and cover with wafer paper; when set, remove to a clean board and cut into bars with a sharp knife. In running sheets to thickness, arrange the loose bars on the pouring slate to form a square in proportion to the size of the boil.

WHAT TO DO WITH SCRAPS AND SIFTINGS.

It is necessary to know how to use up the scraps, siftings, spoiled boils, candied and otherwise unsaleable goods. People who make jam or liquorice goods know, of course, what to do with them, but small makers, often accumulate a lot of waste, which seems always in the way. This should be avoided as much as possible, not only on the ground of economy, but for the good order and general appearance of the work-shop.

Keep the acid scraps separate from the others; have two pans (earthenware will do), and make it a rule, when sweeping down the plates, to throw the acid scraps into one pan and the others into the second pan; keep them well covered in water, and, as the syrup then gets too thick, put in more water, in order that the scraps may dissolve. When making dark goods, such as cough candy, cough drops, cocoanut candy, stick jaw, &c., &c., use a proportion of this syrup in each boil, dipping it out with a ladle. As a rule, a careful workman would use up his scraps every day. Some use the machine scraps by putting them in the next boil when the sugar is on the slab. The writer's experience is that that method is objectionable, as it not only causes the boil to be cloudy, but very often grains it.

Melt the acid scraps in water enough to form a thin syrup; put in some whiting, powdered chalk, or lime; put the pan on the fire and stir until the whole boils; see that all the scraps are dissolved; remove the pan and let it stand for an hour, then strain through flannel. Use this syrup in the same way as the other for making common goods.

LEMON SHERBET.

9-lbs. Powdered Sugar.	2-lbs. Tartaric Acid.
2½-lbs. Carbonate of Soda.	¼-oz. Essence of Lemon.

Process.—If the tartaric acid is very dry, it is generally lumpy; crush it to a fine powder with a heavy rolling pin or thick glass bottle, then mix the sugar, acid, and soda together; sprinkle the essence of lemon over the heap, then work it up with the hands; afterwards pass it twice through a fine sieve; pack it in bottles with good fitting corks. Take care that the ingredients and bottles are perfectly dry. One or two drops of otto of roses improves the fragrance and gives it a bouquet.

PERSIAN SHERBET.

9-lbs. Powdered Sugar.
2½-lbs. Carbonate of Soda.
2¼-lbs. Tartaric Acid.
¼-lb. Essence of Lemon.
¼-oz. French Cream.

Process.—As for lemon sherbet, the addition of the French cream or white of egg makes it frothy when mixed with water and carry the head; see that all the ingredients are thoroughly dry, any dampness will spoil the batch; be very careful the bottles or tins are dry, and when filled, are made air-tight.

RASPBERRY SHERBET.

9-lbs. Sherbet Sugar.
2½-lbs. Acid, Tartaric.
2½-lbs. Carbonate of Soda.
1-oz. Essence Raspberry.
Liquid Carmine.
¼-oz. French Cream.

Process.—Mix the colour, essence, and French cream, and thoroughly incorporate it with the sugar, mixing it with the hands till quite dry; be careful not to use too much colour; if too light, more can be added, then add the acid and soda, working it well up together; pass the heap three times through a fine copper wire seive, bottle, and secure. These proportions give a good article—the last two carry a foamy head. A cheaper article can be made by increasing the proportion of sugar.

Many unprincipled people use a proportion of alum in lieu of so much acid, but this is despicable, as it has a baneful effect on the stomach and is prejudicial to health. Sherbet of all kinds is largely consumed by young people. Pineapple, rose, and other flavours are made, the ingredients are the same, the flavour and colour alone differing.

CHOCOLATE MAKING.

Chocolate making, until recently, was considered a distinct business. Nevertheless, by reason of its very nature, it was impossible to disassociate with the legitimate business of the confectioner. At all times the big guns had to rely mostly on the retail houses to distribute their goods. So select and independent was this special business, that market fluctuations seldom affected the prices.

The few, with what seemed like a tacit understanding, made the

prices for wholesale and retail purposes, the dealers' profit being fixed, the bottom price being an open secret to the trade generally. This led to cutting amongst the wholesale houses, until the goods were handled intermediately at bare cost, the manufacturers and retailers dividing the profit.

This is altered to a great extent. Many smaller houses have had a look in with chocolates, and not a few of the large confectioners have a special department where the nibs are received and the cocoas and chocolates turned out in every variety, much to the general welfare and healthy development of the trade. We have also our small sugar boilers making their mark in this direction, turning out popular and profitable goods in many shapes. The fruit of Theobroma Cacao gives not only a pleasant flavour, but is nutritious in the highest degree, and adapts itself for mixing with sugar in various proportions with the best results.

In placing before the reader the following recipes and instructions for preparing chocolate and chocolate creams of various kinds, I have to acknowledge that I am indebted to the kindness of a personal friend of great experience in this line for whatever merit they may possess; at the same time I have to offer him my apologies for the manner in which I have condensed his very carefully compiled manuscript. His minute and elaborate description of the process and machinery, which is employed in preparing the cocoa nibs for chocolate making, was not in accordance with my idea of a book of this description. My object all through this work being to teach the novice and assist those who have but imperfectly learned the business, or having learned one or two branches want a knowledge of the others; how far I may have succeeded in doing this I must leave those who use the book to judge. It is quite possible to say a great deal, and to say nothing to the point. Long and intricate processess are generally confusing to the learner, and are passed over as being too difficult for him; at the same time, the difficulty may have been created simply by the manner in which the instructions are written. I hope I shall not be found guilty of this. For these reasons, I have taken the responsibility of altering the chocolate recipes to their present shape. Where chocolate and cocoas are manufactured on an extensive scale, and form the chief, if not the only, production of a particular firm, labour-saving machinery has from time to time been invented and introduced into the several departments

with so much success, that the old-fashioned method is entirely superseded. Formerly the cocoa nibs were prepared for chocolate making by pounding them in a heated mortar with a heavy iron pestle, afterwards ground smooth on heated granite slabs with a roller of the same material. This process was slow, dirty, and tedious. The employment of powerful and expensive mechanical contrivances now produce a much better chocolate paste at less than one-fifth the cost for manual labour. This paste may be bought pure from most of the large cocoa houses, and is admirably adapted for confectionery; it will answer the purpose for any of the following recipes. By adopting this course, it will be more convenient for the learner, and save an endless amount of unprofitable labour; besides, it would require experience in selecting cocoanuts suitable, and even if the learner could select sound, fresh nuts, there would be few country towns where he would have the opportunity of doing so.

SWEET CHOCOLATE.

10-lbs. Sugar. 1-lb. Fresh Butter.
2½-lbs. Glucose. 2-lbs. Pure Cocoa, unsweetened.
½-oz. Essence of Vanilla.

Process.—Put the sugar, glucose and water in a clean pan, giving it an occasional stir until it boils; put on the lid for five minutes; remove the cover; see that the sides of the pan are free from sugar; if not, rub it round with damp cloth or sponge; put in the thermometer and boil till it reaches the degree of thread, 230; add the cocoa paste (broken small) and the butter; keep stirring till it reaches the degree of a soft ball; take the pan off the fire and pour in the vanilla flavour, and stir the lot till it gets quite stiff; pour out on greased tins; when cold, it eats soft and mellow. This is a delicious sweet and sells well.

CREAM FOR CHOCOLATE CREAMS OR BARS.

10-lbs. White Sugar. 2½-lbs. Glucose.
3 Pints Water.

Process.—Put the sugar, glucose, and water in a clean pan and boil in the usual way until the batch reaches the degree of feather, 245 (keep

the sides of the pan free from sugar); pour out on a damp pouring plate and let it remain till nearly cold; then, with a long palette knife or spatula, commence to rub the sugar against the plate and work it about until it changes from a clear syrup to a snow white creamy substance; then knead it with the hands until of uniform softness and no lumps left in the mass; it is now ready for use, and may be kept covered in stoneware jars until required for the various purposes. In winter, the sugar need not be boiled so high; in hot weather, a little higher. When packing the cream away in jars, it is better to keep the top moist by laying on a damp cloth before putting in the cork. Seeing that cream keeps so well, of course, it is a saving to make much larger batches at a time. This can be easily arranged by multiplying the proportions according to size of pan and convenience. These proportions are a guide, but the writer knows of no absolute *must be*, this or that, although he has made as many cream goods as most people, and with as much success, he has seen as fine a sample made in the same workshop when the boil was made up a little different. However, in submitting his own formula, it may be taken for granted he is not a mile from the bull's eye,

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CHOCOLATE CREAM ROLL, THICK.

10-lbs. Sugar. 3 Pints Water.
2½-lbs. Glucose. Pure Cocoa.
½-oz. Essence of Vanilla.

Process.—Prepare the cream as in last recipe, but boil the syrup up to a strong thread, 250, and add the flavour; when creamed, break off portions and roll them to the desired thickness; keep them on the move until they become firm enough to keep their shape; have some melted chocolate, into which dip them once, twice, or three times, according to thickness of coating wanted.

CHOCOLATE CREAM BUNS AND CAKES.

10-lbs. Sugar. 3 Pints Water.
2½-lbs. Glucose. ½-oz. Vanilla Essence.

Process.—Boil the sugar, glucose, and water in the ordinary way to the

strong feather degree, 245, then pour on a damp slab ; let it remain till nearly cold ; add the flavour and, with palette knife or spatula, work up the boil until white and creamy ; shape it with the hands or press it into tin moulds, then stand it in a warm place to harden a little on the outside. Melt some chocolate paste and cover the goods smoothly with it, using either knife or brush ; when dry, glaze them by brushing on a solution of shellac dissolved in alcohol. N.B.—In these last two recipes, the sugar is boiled higher than the "Cream for Chocolate Creams," because the goods are so large the soft cream would not keep in shape. In melting pure chocolate, simply put it in a tin, together with a piece of lard or cocoa butter, stand it near the fire ; give it an occasional stir ; it will soon dissolve ; use no water, or it will run to powder and be spoiled.

CHOCOLATE CREAM BARS, No. 1.

10-lbs. White Sugar. 3 Pints Water.
2½-lbs. Glucose. Vanilla Flavour.
Melted Chocolate.

Process.—Prepare the cream as directed in "Cream for Chocolate Cream," or use some of that cream. Have some tins with edges one and a half inches deep ; grease some paper and fit it neatly round the sides and bottom ; melt some of the cream on a slow fire ; flavour with vanilla as soon as the cream is sufficiently melted ; remove the pan and pour contents into the tins to make a sheet about one inch thick or less. When set, carefully empty, so as not to break the cake ; have some melted chocolate and, with a soft brush, coat the cream on both sides ; lay them on wires till cold and set ; cut up into bars the required size. N.B.—The knife for cutting bars of cream should be good, having a thin polished steel blade, with a good edge. An old worn out thing breaks the cream and makes it irregular.

CHOCOLATE CREAM BARS, No. 2.

10-lbs. White Sugar. 3 Pints Water.
2½-lbs. Glucose. ½-oz. Essence of Vanilla.
Melted Chocolate.

Process.—Prepare the tins by lining with greased paper, fitting them smoothly ; melt some sweet chocolate paste and pour it about a quarter

of an inch thick on the bottom of the tins; when set, prepare some cream as directed for "Cream for Chocolate Creams," or use some of that cream melting it over a slow fire (do not allow it to boil); stir in the extract of vanilla and pour the batch in tins about one inch deep; when set, coat on top with melted sweet chocolate; when this lot is cold and quite set, cut up into bars with a sharp knife.

COMBINATION CREAM BARS.

Have tins with sides two inches deep; line them smoothly with greased paper; melt some cream as already directed; flavour with vanilla and pour it in the tin half an inch deep; when set, melt another lot of cream, colour it yellow, and flavour with essence of lemon; pour it on the top of the white cream; melt also a third portion of cream, colour it a bright pink, flavour with raspberry, and pour it over the yellow cream; when the lot gets cold and quite set, lift it out of the tin and spread some melted chocolate paste, top and bottom; when the batch is dry, cut it up into bars. These goods look very pretty and sell well. N.B.—The object in lining the tins with greased paper is to insure the cake turning out unbroken.

MOULDED CHOCOLATE CREAM BARS.

Moulds for chocolate are either made in stout tin or copper of different devices, and generally to a size so that when filled the bars would weigh so much each as ¼-lb. or ½-lb. nett.

To make these cakes, first melt some sweet chocolate paste and pour it into the tins, about one-eighth of an inch thick or less; turn the moulds about, so that the chocolate may coat them all over; when set, fill up the moulds with melted cream, flavoured with essence of vanilla: allow them to stand till cold and hard, then with a brush cover the cream with a little melted chocolate paste; in a few minutes the cakes may be turned out of the moulds. If the chocolate paste is of good quality and evenly melted, it should carry a good gloss on its face. However, if too dull, go over it with a camel hair brush, dipped in a solution of shellac, dissolved in alcohol.

SWEET CHOCOLATES.

Plain sweet chocolates are made in many shapes and qualities, which are known by different names, such as medallion, shilling chocolate, vanilla chocolate, &c. To make these, a great deal of care and machinery is required, the sugar having to be worked into the chocolate by means of heavy crushing machines ; and to make a good quality experience is required. These goods small confectioners had better buy, and confine their attention to the cream bars, &c. There is a wide field for ingenious men, by introducing new shapes in chocolate creams, and what sells better than the plain bars at 2-ozs. a penny, which shows a very reasonable profit. It will be clearly seen that buying the chocolate from the large houses, in making any kind of pure or simply sweetened chocolate, the small manufacturer is so handicapped by his larger brethren as to make it impossible for him to successfully compete with them on their own ground. However, it may be valuable to some and interesting to others to know how they make the different sorts on a small scale, and for these reasons I give the following recipes, coupled with the above remarks.

SWEET CHOCOLATE PASTE.

5-lbs. Pure Cocoa. 3-lbs. White Sugar Powdered.

Process.—Put the pure cocoa into a heated mortar, then with a warm pestle pound it until it is reduced to an oily consistency ; then add the powdered loaf sugar, pounding away till it is mixed thoroughly, then turn half of it into a tin and keep it in a warm place ; grind the other half on a warm slab with a heated roller until it is reduced to a smooth impalpable paste, which will melt in the mouth like butter ; serve the other half in the same way, then take the whole quantity and place it on the stone again (this time the stone or slab must only be luke warm) ; work it up and fill the moulds ; give them a shake to level the paste ; when cold, it will turn out easily. Chocolate prepared in this way is ready for sale, or may be used for making chocolate drops or coating creams. Vanilla flavouring is an improvement.

CHOCOLATE DROPS (Plain).

Warm some sweet chocolate as described above, adding a little lard, which will make it work free; when it is just sufficiently heated to be pliable, pinch off little pieces; roll them in the hand to the size of a small marble; place them in rows on sheets of white paper, each row about an inch apart; when the sheet is covered, take it by the corners and lift it up and down, letting it touch the slab each time; this will flatten the balls into drop shapes; they should be about the size of a sixpenny piece on the bottom; when cold, they will slip off the paper without trouble.

CHOCOLATE DROPS (Nonpareil).

Proceed exactly as for plain drops; when the drops have been flattened, cover the sheets of paper entirely over with white nonpareils (hundreds and thousands); when the drops are dry, shake off the surplus ones.

CHOCOLATE CREAMS.

To make these, we must have starch trays and plaster of Paris moulds (see remarks on the Drying Room and Moulds for Creams). Smooth off the trays and mould with small cream moulds; melt some cream (see Cream for Chocolate Creams); use the runner, and fill the starch trays; in an hour the cream will be set hard enough to be taken out of the starch; clean them off with a soft hair brush; they are then ready for coating. Warm some sweet chocolate paste until melted, then drop the creams into the melted chocolate, two or three at a time; lift them out with a long fork and place them on glazed paper or sheets of tin to dry; put them in a cool place to harden; pack carefully in paper lined boxes in such a manner that they hardly touch each other; if packed roughly, like most other sweets, they become spotted and rough, spoiling the appearance altogether. N.B.—To thoroughly understand the formula, the novice is recommended to read all the instructions given in reference to starch work generally.

QUALITY OF CHOCOLATE.

Genuine chocolate should eat with a cool sensation to the tongue, melt gently in the mouth like a piece of butter leaving no roughness or astringency, of a clear brown colour, the surface smooth and shinning; when broken, it ought to be compact and close, not crumbly. Adulterated chocolates may be told by the gloss coming off when touched, crumbly when broken, and eating with a rough taste in the mouth. Chocolates should be warehoused in a cool place. Exposure to sun or gas turns it brown and specky, while a very moderate heat melts it.

CHOCOLATE FOR DIPPING.

This mixing is so often required by confectioners for so many purposes that a good general recipe will not be out of place. If the instructions are followed and a little discretion used with the colours, a light, glossy chocolate coating will result.

1-lb. Pure Chocolate.	Chocolate Brown Colour.
3-oz. White Wax.	Cochineal.

Process.—Put the chocolate in a saucepan; stand on the furnace plate or near a fire; break up the wax into little pieces and stir it in until all is melted; then add the brown colour, with a little liquid cochineal, stirring the whole till thoroughly mixed; it is then ready for use. For cheap, common goods, more wax may be used. When mixing in the colouring, try a little on a piece of white paper until satisfied with the blend.

STARCH ROOM.

This is an important department in the works of a modern confectioner. In it are made gelatines, gums, liqueurs, fondants, and fancies of every description. There is perhaps no branch in this business giving greater facilities for the display of fertile brains, nimble fingers, and

careful workmanship. The countless forms, shapes, and combinations which daily emanate from this branch by no means exhaust the possibilities. Every week sees fresh displays of new goods characteristic of the starch room ; new designs, new ideas, and new colours, flavours, and ingredients are also introduced. Not only the confectioner, but the chemist and purveyors of good things are all contributing to the development of this branch. It would make many of the *old hands* turn in their coffins to look down the lists of some firms who cater for the trades' requirements to see the immense variety of fruits, flavours, colours, chemicals, spices, and preparations he can put his hand on wherewithall to make goods to attract attention and tempt the palate of the public. Within even the writer's recollection, a very small corner of a price list was sufficient to catalogue all the sundries which were supposed to be sufficient for the requirements of this industry, and, at best, the flavours were very indifferent in quality, while colours were few, common, and seldom wholesome. The methods of working the whole range of these goods are practically alike, but the mixings differ, not only according to price, but also according to fancy, especially in this case with regard to gelatine and gum goods. Perhaps no two workmen use exactly the same proportions, although they may obtain very nearly the same results. The quality and strength of the materials used may account for this to some degree, but not altogether. Where prices are cut and competition keen, one shilling per cwt. is an object, so the dearer articles are used so sparingly that the goods just hold together at an ordinary temperature ; in hot weather they run, while in cold weather, if kept long they dry, shrink, and get hard. The instructions in this book give formulæ for a good class of sweets, such as are ordinarily sold by first-class confectioners, but there is room for variation. The expert reader may alter or arrange the qualities to suit his trade or price, but it is not advisable for a novice to do so until he has gained some knowledge by experience, and be able to judge what effect the lessening of this or the addition of that would have on the finished goods. In the starch room we have not so much assistance from the engineer as we had in sugar boiling room ; the workman has to rely on himself for his variety and ideas. It is here the clever man can show his talents, and, if he possesses any inventive genius, there is ample scope to show it. To be original here, is to be great—a new mould, a new combination, or a new process that has merit, catches on at once.

Experiments are easily made, and the material from which the moulds are made is inexpensive, *i.e.*, plaster of Paris—of this more anon.

TOOLS USED IN THE STARCH ROOM.

The tools and appliances needed for these goods are few, simple, and inexpensive, and may be enumerated as follows:—A confectioner's stove, a copper boiling pan, a confectioner's thermometer, a wooden box to keep the starch powder in, which should be 4-ft. long, 26-in. wide, and about 2-ft. 4-in. high; fix two pieces of narrow wood across this box, a foot from both ends, to take the bearing off the trays when being smoothed off and moulded. It will be observed that the mouth of this box is larger than the trays, that is for the purpose of catching all the flour that may run over the sides and ends of the trays while being smoothed off with a stick. The runner for filling the starch moulds is a very simple tool, being made by a tinsmith exactly similar to a tun dish or funnel used by publicans for putting into the necks of bottles and jars to empty the spirits or beer through; have a hole in the bottom about half an inch in diameter; it has two little turnover handles at the top, opposite each other. The runner should be large enough to hold two or three pounds of syrup. When filling the moulds, hold the runner with both hands, by putting the little fingers through both handles; have also in the right hand, between the forefinger and thumb, a piece of stick long enough to reach the bottom of the runner, so that you may regulate the stream, or stop it altogether when required, by plugging the hole. A few trays will be necessary, which is mentioned under drying room. The starch powder is in appearance like farina, and is used by all confectioners for moulding purposes. Glucose is a syrup, the best qualities of which are transparent; original casks generally weigh from 5 to 9 cwt. It may also be had in a solid form, and is packed in convenient cases containing 1 cwt. each. The syrup is generally preferred, but where the bulky packages would be objectionable, the solid may be used with success. Crystalizing tins should be made of good, strong tinned iron, 24-in. long, 14-in. wide, and 4-in. deep, with a hole at the bottom in one corner for drawing off the syrup when the goods have taken sufficient crystal. With the exception of a

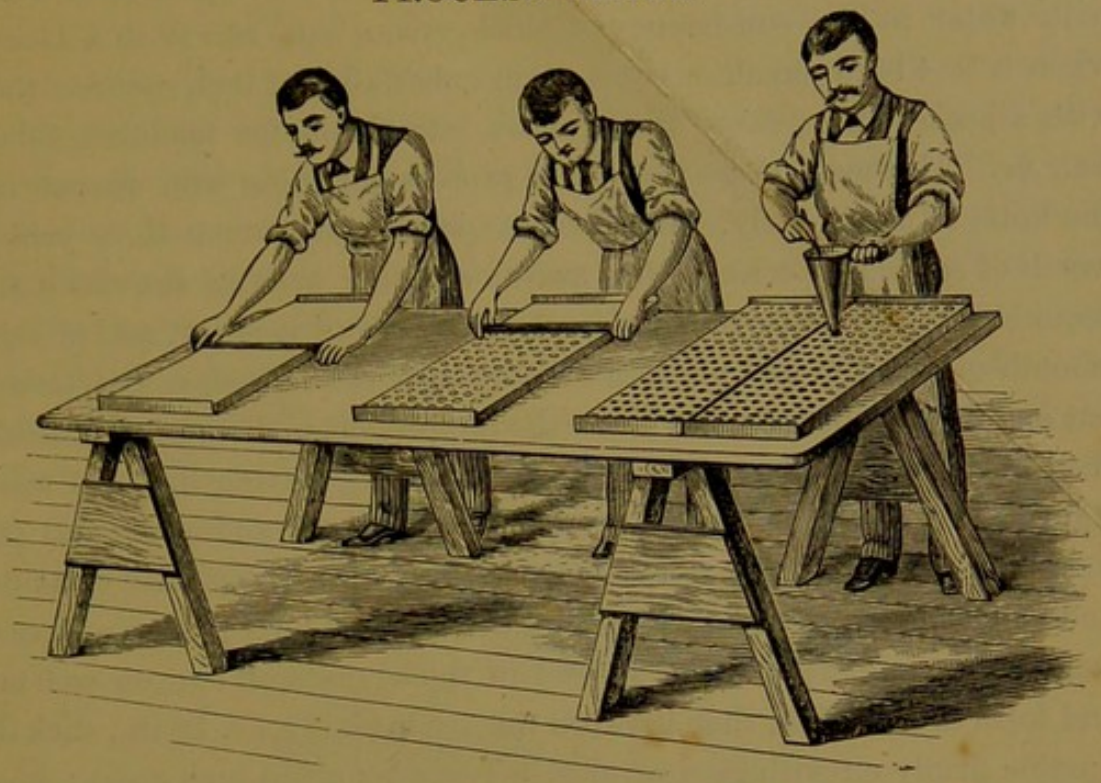
hand brush and a pair of bellows, these are about the only tools required in the starch or moulding room. A handy man may make his own trays and starch box, or a carpenter would supply them, the size mentioned, the price being about two shillings per tray.

THE DRYING ROOM.

This room is indispensable to make jubes, creams, pan goods, lozenges, &c. ; in it goods are baked, dried, and crystalized.

The arrangements and constructions are simple, as the chief object is to generate heat ; the next, utilize the space to the best advantage for the storage of the starch trays while the goods they contain are undergoing the finishing process. A moderate sized room, say from 14-ft. to 16-ft. square, if well racked, will hold a lot of stuff, and be large enough for a moderate trade ; at any rate, it would be large enough to begin with. The racks are run up like shelves, but only support the trays at each end ; they are usually made of timber, about 2-in. wide and 1-in. thick ; the shelves are about 4-in. or 5-in. apart, with an upright between each row of trays. The room may be heated by an iron stove or by steam pipes ; the position and construction of the stove would be determined by the flue, with due regard to the safety from fire and convenience for working ; steam pipes, of course, run round the room under the trays ; the degree of heat would be regulated according to the class of goods. A good rule, where a stove is used, is to keep the room a little above summer heat, putting the goods requiring most heat nearest the stove, and *vice versa*. The starch trays should be made of good, hard, dry wood, about 36-in. long and 20-in. wide, with sides a full inch deep ; the ends should be quite 2-in. deep, so that, when the trays are packed on the top of each other, there is a space of one inch between the bottom of the one and the top of the other, the bearing, of course, would be on the raised ends. When trays are not in use, they should be kept in the drying room ; the starch powder soon contracts damp if exposed long in a room where any boiling is going on and steam floating about ; besides, warm starch powder gives better results, especially is this the case with liqueurs, creams, and gums.

PROCESS BLOCK.



The above engraving represents the three principal processes in moulding shapes. The figure with the stick in his hand over the smooth white tray is supposed to be smoothing off the starch ready for No. 2, who is making the indentations which No. 3 is filling. It is not quite as distinct as it might have been, however, it will give the reader a better idea of how the work is done than could have been conveyed in words, and, taken together with the instructions, will no doubt be sufficient to enable one to form plans for a beginning.

Manufacturers have, as a rule, an objection to allow strangers to look over their works. This block may, therefore, be useful in illustrating a process it is so difficult to see worked out. Men are represented as smoothing and moulding, but this is generally done by boys or women, and the trays are usually smoothed off in the starch bin, so that the starch powder which falls over the trays drop into the proper receptacle. We put the tray on the bench so that it might be seen.

MOULDS FOR JUBES, CREAMS, LIQUEURS, &c.

Moulds for starch goods are usually made by the workmen himself from plaster of Paris. A man handy with his pocket knife, and a taste for carving, is very useful for designing new moulds, and is really a

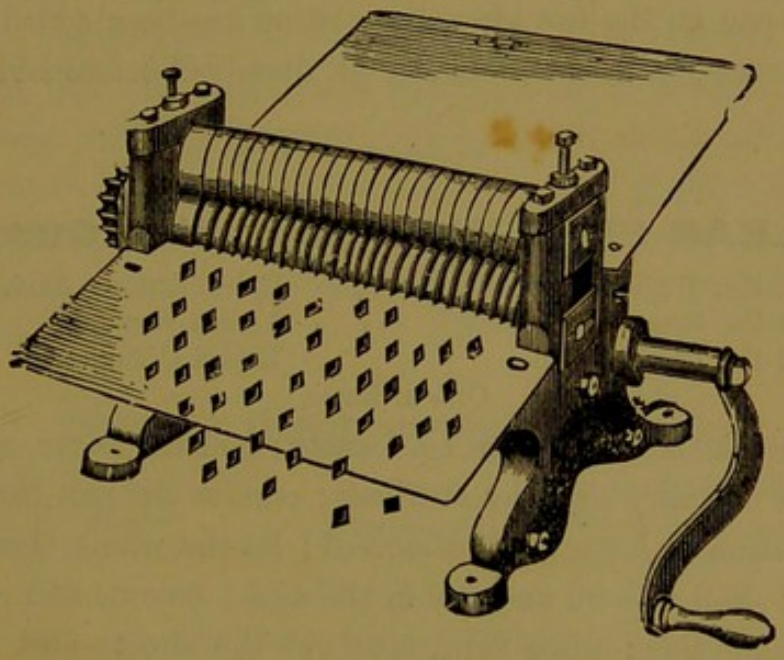
catch in any workshop. The process is, dilute some plaster of Paris with water to the consistency of thick cream and run it in a block; when it sets hard, break or cut it up in cubes about 1 inch square; then with a pocket knife, carve these cubes into shapes for fondants, jubes, &c., &c. However, there is another process for those who cannot use the knife so dexterously. Buy from a pipe maker two or three pennyworth of soft clay; select a few sweets or other articles for which you require moulds; work the clay in the hands until it is soft and pliable; smooth off the top and press the sweet into the soft clay, and take it out again carefully, so as to leave the impression as distinct as possible, then put some plaster of Paris in a small jug, having lip; add water sufficient to make it like thick cream; stir it well and pour into the indentation made in the soft clay; when set, take the plaster casts out and trim them with a small knife and cut the back level; plane a piece of wood 26-in. long, 2½-in. wide, and a ½-in. thick; mark off 4-in. on each end and form the handles; then between the inside marks, *i.e.* 18-in., stick the moulds firmly on with gum or glue in two rows a full inch apart; when not in use, keep them hung up in a dry place. Note.—Do not make the plaster too thin when making the moulds, or it will be porous when dry; this will cause the starch to adhere to them when moulding; add just sufficient water to make it flow, and not mix too much at a time, or it will get too hard before it can be used.

GELATINE WORK.

This department has received special attention during the last few years in every quarter. The great advance in the price of gum has almost put it beyond the reach of confectioners, but for very best goods. Therefore, gelatine, together with farinaceous and other substances, have been experimented with as a substitute for gum with more or less success. We have now an assortment of these goods, which, even to chronicle, would fill more space than we can spare for the entire subject, nor would it be profitable study for the learner, as we give the chief mixings for the principal selling lines, which, in themselves, make a fair variety, and would recommend the beginner in cogitating something new and get out of the beaten tract.

In the formula, white sugar means Dutch crushed; granulated, loaf or crystals; by gelatine we mean the sort generally used by con-

fectioners, *i.e.* French, sold in cakes about one eighth of an inch thick, price from about 70s to 100s per cwt. It is necessary to mention this, as there is a lot of these gelatines sold which, soaked according to instructions, would be quite dissolved and useless—the better the gelatine the more water it will hold. After gelatine goods have been crystalized in sugar, they ought to dry in an hour or two. Should they remain damp, there is too much water in their composition, either the gelatine has remained too long in soak, or the syrup has not been boiled high enough. Should they be too dry, the reverse is the case. It would be impossible to give positive instructions, on account of the different qualities of gelatine, but a mistake can be easily rectified, and the strength of the gelatine with which you are working known by attention to these remarks.



CRYSTALIZED ROSE AND LEMON JUBES.

14-lbs. White Sugar.
7-lbs. Glucose. = 33⅓%
3-lbs. Gelatine, weighed when dry.
6-oz. Powdered Tartaric Acid.
4 Pints Water.
Saffron and Cochineal Colouring.
Rose and Lemon Flavouring.

PROCESS.—Put the gelatine in a vessel, cover it with cold water, and let it remain in soak for about twelve hours; then put the sugar, glucose, and water in the boiling pan; put on the furnace and boil in the usual way to a stiff ball, 255 (in summer to nearly crack, 300); lift the pan off the fire and stir in the soaked gelatine, dropping it in a sheet at a time, and keep stirring until dissolved; let it stand a short time till the

scum rises, then skim it off; stir in the acid (which should be well ground); divide the boil in two; colour one part yellow and add a few drops of the essence of lemon; colour the other a light pink with liquid carmine or cochineal; pour the mixture into oiled tins in sheets about ½-in. thick; stand them in a cool place till stiff, then take them out; cut them first into slices, then into squares, either with scissors or jube machine; roll them in a heap of crystal sugar; sift them out; when dry (three or four hours), they are ready for sale or packing. N.B.—Under no circumstances colour gelatine goods with aniline dyes. Use liquid carmine or cochineal for pink, saffron for yellow, and vegetable colours for the others. Always crush the acid fine before putting in the pan. Be careful in using the essences of pear, pine apple, and otto of roses, as a little too much makes the goods taste disagreeable. Do not put the pan on the fire after the gelatine has been added, and put it in, a sheet or two at a time, and stir till dissolved before adding more.

CLEAR PINK JUBE (Imitation Gum).

8-lbs. White Sugar.
8-lbs. Glucose.
2-lbs. Best Gelatine.
1½-oz. Tartaric Acid.
3 Pints Water.
Liquid Carmine.
Otto of Roses.

Process.—Soak the gelatine in cold water; boil the sugar, glucose, and water in the ordinary way to a stiff ball; remove the pan from the fire; add the gelatine and stir until dissolved; let the whole stand until the scum rises; skim this off and stir in the acid; flavour and colour; now pour into oiled tins; when firm, take out the sheets and cut up with scissors or machine, then run over them with clean rag, dipped in olive oil, and they will have a beautiful, bright appearance.

CLEAR RASPBERRIES.

8-lbs. White Sugar.
7-lbs. Glucose.
2-lbs. Gelatine.
1½-oz. Tartaric Acid.
3 Pints Water.
Liquid Carmine.
Essence Raspberry.

Process.—Soak the gelatine by covering it with cold water for about twelve hours, then boil the sugar, water and glucose to a stiff ball; remove the pan from the fire and gently add the gelatine; stir until

dissolved ; let it remain for a little time, then skim off the top ; stir in the acid, and colour a light red, adding the essence ; have the trays smoothed off and moulded with raspberry shapes ; run in the boil and let them remain in a cool place till set ; sift out the goods ; blow off any starch which may adhere and rub them up with a little olive oil to brighten. A pound or two of raspberry jam may be used instead of the essence.

CLEAR LIQUORICE JUBES.

8-lbs. Brown Sugar.
6-lbs. Glucose.
2-lbs. Gelatine.
1-lb. Block Juice.
2-oz. Tartaric Acid.
3 Pints Water.
Aniseed Oil.
Jetoline Black.

Process.—Soak gelatine as directed. Bring the sugar, glucose, and water to the degree of ball ; remove the pan from the fire ; stir in the gelatine and liquorice (previously melted) ; let it remain till a scum forms on top ; skim it off, then put in a few drops of aniseed and sufficient colour to make it a black shade ; pour in oiled tins, making the sheet ½-in. thick ; stand in a cool place ; when set, cut up in squares with scissors or machine, and brighten with a drop of good olive oil. They are then ready for sale.

CLEAR PINE APPLE JUBES.

8-lbs. White Sugar.
6-lbs. Glucose.
2-lbs. Gelatine.
1½-oz. Tartaric Acid.
3 Pints Water.
Saffron Colour.
Pine Apple.

Process.—Have the gelatine soaked and proceed exactly as for clear pink jubes ; when ready skim the boil carefully ; colour with saffron and flavour carefully with essence of pine apple (only a few drops). These clear goods used always to be made of gum, although we cannot give them the body and flavour of that famous mucilage, yet we give the appearance they were wont to be known by.

BLACK CURRANT JUBES.

8-lbs. White Sugar.
6-lbs. Glucose.
2½-lbs. Gelatine.
1½-lbs. Black Currant Paste or Jam.
1½-oz. Tartaric Acid.
3 Pints Water.
Dark Purple Colouring.

Process.—Cover the gelatine with cold water and let it soak twelve hours ;

boil the sugar, glucose, and water in the usual way to the degree of ball ; remove the pan from the fire and gently stir in the gelatine (a little at a time) ; add the black currant paste ; stand aside till the scum forms ; skim this off ; stir in the acid and enough colour to make it a deep purple ; pour the mixture into oiled tins in sheets ½-in. thick ; when set, take them out and cut up with scissors or machine. The black currant paste gives the best flavour.

CRYSTALIZED APRICOTS.

8-lbs. White Sugar.	1½-oz. Tartaric Acid.
8-lbs. Glucose.	3 Pints Water.
2½-lbs. Gelatine.	Apricot, yellow colour.

Essence of Apricot or Apricot Pulp.

Process.—Smooth off the starch trays and mould with large apricot moulds ; have the gelatine ready soaked ; boil the sugar, glucose, and water to a stiff ball ; remove the pan from the fire ; stir in the gelatine until dissolved ; stand the boil aside until the scum rises ; skim this off ; stir in the acid, colour, and flavour with essence (or pulp) ; when thoroughly mixed, run into trays ; let them stand in a cold place till set, then sift them from the starch, blowing off any that may adhere; turn them out and put them on a clean slab and sprinkle them over with cold water ; mix them up so that they are equally damped, then cover them over with dry crystal sugar ; turn them over again and again with hands until they have taken a good coating, then they may be sifted and spread on trays to dry ; before boxing, look them over ; take out all the bad shapes, and separate any that may be coupled together.

GELATINE COCOANUT BARS (Yellow).

8-lbs. White Sugar.	1-oz. Acid, Tartaric.
6-lbs. Glucose.	3 Pints Water.
2½-lbs. Gelatine.	Saffron Colour.
3-lbs. Cocoanut Sliced.	Lemon Flavour.

Process.—Soak the gelatine in cold water for twelve hours. Boil the sugar, glucose, and water to a stiff ball, 255 ; remove the pan from the fire ; stir in the gelatine till dissolved ; let it stand for a few minutes and remove the scum from the top, then add the acid, flavour, and cocoanut ; gently stir the whole until well mixed ; tinge a bright yellow

with saffron; pour into oiled tins, making the sheets ½-in, thick; when set, cut up into sticks to sell four or eight a penny. N.B.—This boil may be divided into two lots, one half coloured red and flavoured raspberry, or a second boil may be made precisely as this one, altering the colour and flavour only.

WEDDING CAKE JUBES.

10-lbs. Sugar.
8-lbs Glucose.
2½-lbs. Gelatine.
1½-oz. Acid, Tartaric.
1-oz. Bi-Carbonate of Soda.
2-oz. Icing Sugar.
Carmine.
Saffron.
Essence of Lemon.

Process.—Prepare the mixture as before; when the gelatine has been added and the boil skimmed and flavoured, divide it into three lots; colour one lot red, a second yellow, leaving the third lot clear; pour the yellow mixture into oiled tins, making thin sheets ¼-inch thick; mix the icing sugar, acid, and soda together in the powder; drop it into the clear portion and stir until it swells up into a white foam, then run this on top of the yellow jube, about the same thickness; allow this to set, then run the red colour on top of the white; stand the tins aside till the jube sheet sets stiff; remove them from the tins and cut them up with machine or scissors. When cut, roll them amongst fine crystal sugar until coated. This process makes a very pretty jube, showing the three colours in each jube; the white centre shows up the yellow and pink.

CHEAP JELLY GOODS.

14-lbs. White Sugar.
12-lbs. Glucose.
3-lbs. Gelatine.
2-oz. Tartaric Acid.
2 Pints Water.
Colour.
Flavour.

Process.—Soak the gelatine in cold water for twelve hours; bring the sugar and water to the boil; then add the glucose, and continue boiling till it reaches the degree of stiff ball; remove the pan from the fire and stir in the gelatine and acid till dissolved; colour and flavour to fancy; remove the scum and run the batch into tins. Set the goods aside for twelve hours, then cut up into jubes and crystalize with fine powdered sugar. This is a cheap line; there is not much body in them, but they sell at a price and give satisfaction.

JELLY FANCIES.

12-lbs. Sugar.
7-lbs. Glucose.
3-lbs. Gelatine.
2-oz. Tartaric Acid.
3 Pints Water.

Process.—Soak gelatine in cold water for twelve hours. Smooth off the trays and mould them with fancy shapes. Boil the sugar, glucose, and water in the usual way to the degree of ball ; remove the pan from the fire and stir in the gelatine gradually until dissolved ; let it stand for a few minutes ; take off the scum as it rises, then divide the boil, if required in more colours than one, colour and flavour each portion to fancy, then run the boil in the moulds ; when set, sift the goods out of the starch, blow the dust off, and put them on a clean slab ; sprinkle some cold water over them and roll them about until all are damped, then cover them with fine crystal sugar and mix them up till crystalized all over, and spread them out on trays to dry.

The different recipes already given will give the reader a good general idea of how gelatine goods are made by using different colours, flavours, and shapes. An infinite variety can be produced. It could serve no good purpose to further multiply these formulæ for small goods.

ENGLISH DELIGHT.

English delight, John Bull's pleasures, &c., &c, are made almost exactly as wedding cake jubes, the difference is they are run into deeper tins and in thicker layers ; cut up into blocks the whole length of the sheet and about 1½ inches wide ; cut and sold from the blocks at per ounce.

JAM ROLEY POLEY.

10-lbs. White Sugar.
5-lbs. Glucose.
2-lbs. Gelatine
1-lb. Raspberry Jam.
1-lb. Desiccated Cocoanut.
3 Pints Water.
Liquid Carmine.

Process.—Soak the gelatine in cold water twelve hours ; boil the sugar, glucose, and water sharply to a stiff ball ; remove the pan from the fire ; stir in the gelatine ; stand aside till scum rises and skim it off ; divide the boil into two portions (mix together 1-oz. tartaric acid, 1-oz. carbonate of soda, 2-oz. icing sugar) ; drop this powder and the desic-

cated cocoanut in to one half of the boil and stir briskly until the whole rises in a white foam, then run out in tins, on sheet about ¼-in. thick; now take the other half, colour it a bright red, adding the raspberry jam; stir till thoroughly mixed and run this on top of the white sheet about the same thickness; when cold and set, take out the sheets and make a roll of each. N.B.—Let the red portion be cool when run over the white, as the white being lighter will come to the top if disturbed by the mixture being too hot.

RASPBERRY JELLIES.

9-lbs. White Sugar.	3 Pints Water.
6-lbs. Glucose.	2-oz. Tartaric Acid.
2-lbs. Apple Jelly.	½ oz. Essence Raspberry.
2¼-lbs. Gelatine.	Liquid Carmine.

Process.—Soak gelatine as usual; boil the sugar, glucose, and water to a stiff ball; remove the pan from the fire; stir in the gelatine and let it remain till the scum rises; skim it off, then add the acid, jelly, flavour, and sufficient colour to make a bright red; now mould the batch into raspberry shapes and put them in a cold place. When set stiff, sift them out of the starch, blow off all dust, and put the goods in thin layers in a crystalizing tin and cover them with cold syrup. Let them remain undisturbed for twelve hours, then drain off all the surplus syrup, and turn out the raspberries on clean trays; when dry, pack. N.B.—When putting jelly goods in crystalizing tins, be careful that the layers are not thick, as they lay so close that the syrup cannot get in between them. A good plan is to have wire trays, and fix three or four loosely in each tin, taking their bearings on the ends of the crystalizing tin. By this means, you will get more in a tin with a better result. Boil the syrup, in the proportion of 6-lbs. best white sugar to each quart of water, to the degree of smooth, 215; it must be quite cold when used for gelatine work, or the goods will come out of the tins in a solid block.

BLACK CURRANT JELLIES.

9-lbs. White Sugar.	2-lbs. Black Currant Jelly.
6-lbs. Glucose.	2-oz. Tartaric Acid.
2¼-lbs. Gelatine.	3 Pints Water.

Purple Colouring.

Process.—Soak the gelatine for twelve hours in cold water, smooth off, and mould fondant shapes in starch trays. Boil the sugar, glucose, and

water, as already directed, to a stiff ball ; remove the pan from the fire ; drop in the gelatine a few pieces at a time ; stir till dissolved ; let it remain a short time till the scum rises ; skim it off, then stir in the tartaric acid, jelly, and sufficient colour to make the mixture a bright colour, then mould the batch into starch trays ; when the goods are firmly set, sift them out, blowing off all the dust ; place them in layers on wire frames (fitted for crystalizing tin) ; arrange the frames in the tins and cover with cold syrup ; let them stand for twelve or fourteen hours undisturbed, then drain off the surplus syrup ; take them carefully out of the tins ; pack them on clean trays ; when dry, they are ready for boxing. These goods require handling gently ; they are very delicate and easily crushed.

PINE APPLE JELLIES.

8-lbs. White Sugar.	3-oz. Tartaric Acid
8-lbs. Glucose.	3 Pints Water.
2¼-lbs. Gelatine.	Saffron Colour.

Pine Apple Flavour.

Process.—Soak the gelatine in sufficient cold water to cover it ; mould the trays with pine apple shapes ; boil the sugar, glucose, and water as usual to a stiff ball, and remove the pan from the fire ; stir in the gelatine ; wait till the scum rises and remove it, then add the acid flavour and sufficient colour to make a bright yellow ; pour the mixing into the moulds ; keep the trays in a cold place till set, then sift them from the starch, and blow them clear of dust with a pair of bellows ; pack them in layers on wire frames ; put them in the crystalizing tins and cover with cold syrup ; stand aside where they will not be shaken or disturbed for twelve or fourteen hours, then draw off the surplus syrup and put them on clean trays to dry. In flavouring these goods, use the pine apple gently, only a few drops, too much spoils them.

CONCENTRATED TABLE JELLIES.

The wonderful success of jellies in this form has made it a matter of importance, in order to encourage the already wide demand, that the quality should not only be maintained, but improved if possible. That the public has taken very kindly to them, is shown by the prominence given them in the best positions, both in the windows and on the counters, not only of our confectioners, but also the principal grocers

and Italian Warehousemen in the kingdom. There are several firms who make a speciality of these jellies, and turn out really good goods; at the same time, there are others who sell on the merit of the former, whose rubbish is enough to stifle and kill the trade. *"Twas ever thus."*

The remedy must be with the retailers. This dishonourable and nefarious way of doing business does incalculable damage to the whole trade. It is therefore the duty of the shopkeeper to see that what he does sell is what he represents it to be, and the make of a responsible firm, on whom he can rely in case of dispute or damage.

Seeing the quantity of foreign, and even English, conglomerations now in the market, at all sorts of prices, is the only excuse the writer has for making this interpolation. The materials used for concentrated jellies should be of the finest quality, great care in straining, so that every speck is removed. The tins in which the jelly is run should be silvered and slightly rubbed with a clean rag, dipped in the best salad oil. Strict cleanliness must be observed with everything used, as, when the jelly is inflated with the hot water for the table, every impurity is magnified in a transparent mass. The gelatine used should be of a specially good quality. It is generally much thinner than that used for jubes, &c., consequently does not require to soak so long in cold water. As it differs in thickness, it is impossible to say exactly how long it should be in water; however, till soft enough that the blade of a knife can be forced through easily. The usual time required is from two to four hours.

CONCENTRATED RASPBERRY JELLY.

14-lbs. White Sugar.
8-lbs. Glucose.
3½-lbs. Gelatine.
½-oz. Citric Acid.
2 Quarts Water.
Carmine Colour.
12-ozs. Raspberry Essence, ordinary quality.

PROCESS.—Soak the gelatine by covering it with cold water for two or three hours. Boil the sugar with two thirds of the glucose and water to the degree of feather, 242; remove the pan from the fire; stir in the remainder of the glucose with the gelatine and acid; colour rather a deep red and add the flavour; let it remain in the pan till the scum forms on top; skim it off and run the mixture twice through a jelly bag; pour it into tins, making a sheet a full inch thick; stand in a cool place till set firm, then cut it up into bars 2¼-in. long and 1⅞-in. wide.

This is the size for ½-pints, other sizes in proportion. The bars are then ready for packing. They may be either wrapped in wax paper or rubbed over with pulverized sugar and wrapped in plain paper, then, of course, in showy labels or card boxes.

CONCENTRATED STRAWBERRY JELLY.

14-lbs. White Sugar.
8-lbs. Glucose.
3½-lbs. Gelatine.
½-oz. Citric Acid, powdered.
4 Pints Water.
12-ozs. Strawberry Essence, ordinary quality.
Cochineal Colour.

Process.—Have the gelatine soaked in cold water. Boil sugar, water, and half the glucose to the degree of feather, about 242; remove the pan from the fire; add the remainder of the glucose, gelatine and acid, stirring till all is dissolved; let it remain till the scum rises and skim it off, then stir in colouring and flavour; strain twice through jelly bag; and run into tins, making the sheet a full inch thick; cut and pack as directed in the foregoing.

CONCENTRATED LEMON JELLY.

16-lbs White Sugar.
8-lbs. Glucose.
3½-lbs. Gelatine.
2-Quarts Water.
1½-oz. Citric Acid.
1-oz. Oil of Lemon.
Saffron Colouring.

Process.—Soak the gelatine as usual. Boil the sugar and water with half the glucose to the degree of feather; remove the pan from the fire and gently stir in the remainder of the glucose with the gelatine and acid; let the pan remain a short time, then skim off the top; strain twice through jelly bags, then tinge a bright yellow, and add the flavour (previously dissolved in 4-oz. spirits of wine); run the mixture into tins; cut to size when cold, and pack. If the oil of lemon makes the jelly cloudy, use 5 or 6 oz. of soluble essence of lemon.

CONCENTRATED BLACK CURRANT.

8-lb. White Sugar.
7-lbs. Glucose.
2-lbs. Black Currant Jelly.
3½-lbs. Gelatine.
½-oz. Citric Acid.
4 Pints Water.
Purple Colouring.

Process.—Boil the sugar, glucose, and water to feather; remove the pan from the fire; stir in the soaked gelatine, together with the jelly

and acid ; let the pan stand a little ; remove the scum which rises to top ; add sufficient colour to make a deep purple ; then strain twice through jelly bags ; run into tins ; when set, cut to size and pack. We use black currant jelly for the flavour, as no artificial article gives the true flavour of the fruit.

TURKISH DELIGHT (Lemon).

There are many methods of making this.. To do it properly requires a steam pan. However, small quantities may be managed on the fire. For steam batches, increase the size of boil according to size of pan and convenience.

4-lbs. Good Cooking Starch.	1-lb. Honey.
7-lbs. Ground Sugar.	½-oz. Soluble Essence of Lemon.
14-lbs. White Sugar.	1½-oz. Tartaric Acid.
3-lbs. Glucose.	4 Quarts Water.

Process.—Dissolve the starch with sufficient water to make a smooth paste, then add the ground sugar and stir it well in ; boil the remainder of the water and pour it boiling hot over this paste, stirring till dissolved. Then boil the white sugar and glucose, with sufficient water, to a stiff ball ; pour this syrup into the other ingredients and mix up the whole thoroughly, at the same time adding the honey, lemon, and acid ; run the mixture into oiled tins, making the sheet about 1-in. thick : when set, cut up into cakes ; roll them amongst sherbet sugar ; pack in boxes, using plenty of rough ground sugar between the layers.

TURKISH DELIGHT (Raspberry).

14-lbs. White Sugar.	1-lb. Honey
7-lbs. Ground Sugar.	1½-oz. Tartaric Acid.
4-lbs. Ground Cooking Starch.	Carmine Colour.
3-lbs. Glucose.	Rose Flavour.

4 Quarts Water.

Process.—Exactly same as last, with the exception of colour and flavour ; use both sparingly, two or three drops of rose will be enough to flavour the whole boil.

GUM GOODS.

To manufacture gum goods on a small scale, the process is a little tedious and tiresome, and when we consider the present price of the raw

material, the time required to turn out a perfect jujube or pastile by fire heat, the writer is of opinion that it is neither an advisable nor profitable undertaking for the small confectioner. There are so many other branches to which the novice could turn his attention, in which the make is attended with less risk of failure, while the goods are turned out and finished with despatch. In fact, the making of gum goods should not be attempted by a beginner, as there are so many pitfalls in the process which can only be avoided by a trained and experienced workman. It would be impossible to coach a learner sufficiently by means of a book as to warrant the attempt. There are so many sorts and qualities of gums, that it requires experience to select those suitable. Some gums are only partially soluble in water, others only in spirits of wine or essential oils, and of no use for this business. The gums used by confectioners are gum arabic, mogador gum, and some sorts of East India gums.

These goods can only be made profitable where steam is used as a means of cooking, and, generally speaking, where this system is used, the workmen will have very little need of a book of this description. In a steam pan, batches of from one to two cwt. can be prepared in a quarter of the time twenty-eight pounds would take over the fire, so that it would be futile of a maker by fire heat to try to compete with those who have steam power ; besides, the goods have a better appearance when cooked by the latter process.

The quantities are given for small boilings over the fire. For larger mixings or steam pans, it will be only necessary to increase the proportions.

CLEAR PINK JUJUBES (Gum).

16-lbs. Turkey Gum.
6½-lbs. White Sugar.
7 Pints Water.
Carmine Colour.
Otto of Roses.

Process.—It will be necessary to have two pans, one to fit in the other, leaving sufficient space between for a quantity of water. Put the gum (from which all the grit, &c., has been taken), together with the sugar and water into the inside pan ; put both pans on the fire, with water between them, and stir occasionally until all the gum is dissolved ; see that the water between the pans does not get two low by evaporation ; it will have to be renewed several times during the operation ; it will

take about seven hours to form a thick mucilage, then strain through a very fine sieve or flannel, and let it remain till the scum rises and skim it off; flavour with a few drops of rose and tinge a light pink; run the mixture into tin trays, which have been oiled; put them in the drying room until set stiff, then take them out and clear the dust off the top with an oily rag, and cut up with machine.

CLEAR PINE JUJUBES (Gum).

16-lbs. Turkey Gum.
6½-lbs. White Sugar.
7 Pints Water.
Pine Apple Flavour.

Process.—Same as for pink jubes, but pick all the dark pieces of gum out, in order to get a clear jube, and flavour with pine apple. Be careful in using the flavours, the slightest quantity is enough, too much and they are spoiled.

LIQUORICE JUBES.

16-lbs. Turkey Gum.
5½-lbs. White Sugar.
1-lb. Block Juice.
7 Pints Water.

Process.—The same as for clear jubes, but the dark gum that has been sorted out for clear jubes may be used for the liquorice; the liquorice should be added when the gum and sugar is put on the fire; a little of the oil of aniseed is used by some, while others add a drop of capsicene to improve the flavour.

GUM PASTILES (Lemon).

9-lbs Turkey Gum.
6-lbs. White Sugar.
5 Pints Water.
Saffron Colouring.
Lemon Flavouring.

Process.—The process given for the clear jubes was to have two pans, one fitting in the other, with a space for water. This is adopted in order to keep the gum from sticking to the pan and burning, but with pastiles and other goods, which are sold crystalized, a larger proportion of sugar is used, therefore not so liable to catch, so that the outside pan is dispensed with, and a slow fire used with great care and constant stirring.

Put the gum and water into the pan; place it on a slow fire and stir with a wooden spatula till all the gum is dissolved, then strain the con-

tents through a very fine sieve ; return the strained gum to the pan and add the sugar ; let the whole simmer over a slow fire for an hour, stirring all the time, when we should have a thick mucilage about the consistency of the white of a fresh egg ; remove the pan from the fire ; let it remain until the scum rises and remove it ; tinge with saffron and flavour with lemon. Have the starch trays smoothed and moulded with pastile shapes and run out the boil into them ; stand the trays in the drying room until the goods are stiff enough to keep their shape, then sift them out of the starch, blow off the dust, and crystalize in syrup, milk warm.

GUM PASTILES (Rose).

9-lbs. Turkey Gum.
6-lbs. White Sugar.
5 Pints Water.
Carmine Colour.
Rose Flavour.

Process.—Exactly as last, except in colour and flavour ; tinge with liquid carmine and flavour with otto of roses. All kinds of crystalized gum goods may be made in this way, the shapes colours, and flavours alone differing. These can be easily copied or new ones invented.

CLEAR GUM DATES.

12-lbs. Turkey Gum.
6-lbs. White Sugar.
6 Pints Water.
Lemon Flavour.
Rose Flavour.
Saffron Colour.
Carmine Colour.

Process.—Make up the boil as usual ; when the mucilage is ready, divide the boil into two ; colour one half yellow and flavour with lemon ; colour the other half a light pink and flavour with rose. Mould into date shapes ; when taken out of the starch, blow them off clean, then, with a rag dipped in olive oil, rub them up to make them look bright.

GLYCERINE PASTILES.

36-lbs. Turkey Gum.
19-lbs. White Sugar.
3-lbs. Glycerine.
18 Quarts Water.

Process.—Put the gum and water into a pan and simmer for seven hours, then strain and add the sugar ; continue to boil for another three

hours, then mould in starch, and finish in the usual way. This is the genuine recipe of a celebrated chemist, who sells tons of these goods done up in small tin boxes at a big price.

Another method of making gum goods—some makers keep the gum soaked in cold water for days, giving it an occasional stir two or three times a day until dissolved, they then use this mucilage, bring it to the boil, and add the sugar and simmer till finished; this saves time. Of course, the gum is dissolved in its proper proportion of water.

BEST WAY TO CRYSTALIZE GUM GOODS.

13-lbs. Best White Sugar. 2 Quarts Water.

Process.—Have the goods cleaned and put in crystalizing tins; bring the above quantity of sugar and water just through the boil, and stand aside until only milk warm, then pour it gently over the goods until covered, then slip the hands into the middle of the goods and, with the fingers, just ease this bulk so that the syrup will flow freely in between; withdraw the hands carefully and cover the tin; do not again disturb it for the next twelve hours, when the goods will be ready to drain and dry. To an experienced man, this method may seem a little dangerous and likely to spoil the crystal, but it will not do so if done carefully. Of course, it is understood the goods are not to be roughly stirred up, but simply loosened.

IMITATION GUM GOODS.

There is a quantity of goods sold as French, American, German, &c., gums, all more or less a mixture of the genuine article, with gelatine, farina, &c. Some are very good, others indifferent to taste, but most of them have a much prettier appearance than the original. We give the following couple of mixings which are perhaps the most general, and will give the reader an idea how the batch may be made up.

FRENCH GUM PASTILES.

10-lbs. White Sugar. 5-lbs. Turkey Gum.
9-lbs. Glucose. 2-lbs Gelatine.
3 Pints Water.

Process.—Dissolve the gum in the water on a slow fire and strain it;

then boil the glucose and sugar, with sufficient water, to a stiff ball degree ; remove the pan from the fire ; stir in the gelatine (which has been previously soaked) until dissolved, then add the gum mucilage, thoroughly incorporating the whole by stirring briskly with spatula ; let the pan stand a little, then remove the scum and run the mixture into pastile moulds ; when set firm, crystalize in syrup in the usual way. These goods are usually sold in three or four colours and flavours. The boil may be either divided and each portion coloured and flavoured separately, or more boils can be made and mixed when finished.

AMERICAN GUM PASTILES.

10-lbs. White Sugar.	2-lbs. Glucose.
5-lbs. Gum Arabic.	2-oz. Tartaric Acid.
2-lbs. Gelatine.	4 Pints Water.

Process.—Dissolve the gum in the water in the usual way ; boil the sugar and glucose, with sufficient water, to the ball degree ; then remove the pan from the fire ; stir in the gelatine (which must have been previously soaked) ; mix in the dissolved gum and stir till thoroughly incorporated ; colour and flavour as required, then run into starch trays ; moulded with pastile shapes a little larger than ordinary ; when set, crystalize with syrup almost cold. When gelatine is used, the syrup must be nearly cold, or the goods will melt in the crystalizing tin.

LIQUEURS.

These goods do not seem so popular as they were. One seldom sees them but in conjunction with other sweets, which go to make up our best class of mixture. The plain brandy, rum, and gin almonds have left our windows, together with the decorated orange and lemon slices, wedding rings, and a host of other goods, once the curiosity and delight of our youth.

Though these goods are so simple and easy to make, still order and method must be practised to turn out nice goods of this class—the tons of common, coarse, miserable looking, empty rubbish, with which shops are filled in the shape of cheap mixture, is a disgrace to the trade, and is quite enough to account for the disappearance of the beautiful, full-

flavoured, juicy sweetmeats we call to mind. Still, in the best class of mixtures, we have them still as sparkling and tempting as ever. No goods liven the colours and brighten the bulk more than well made liqueurs. There is no great skill in making; the process is simple enough, and, if the reader will but follow the instructions given with the few recipes, there is no reason why he should fail. Good sugar should always be used, whether for white or coloured; the colours should be good and transparent and used sparingly; the flavours fresh and of the best quality; the starch should be thoroughly dry and warm; new starch must be spread on trays and left in the drying room for seven or eight days, being turned over each day two or three times before being used; if it can be avoided, the same starch should not be used for gelatine work; damping not only spoils the goods, but is a great hindrance to the work; with good, dry, warm starch, the goods will be ready in a third of the time and look altogether brighter and better; when crystalizing, handle them tenderly, especially the large ones; do not put too many in a tin, unless a wire sheet is between them to take the weight; method and discretion is all that is wanted to make the work run smoothly with a successful result.

BRANDY, RUM, OR GIN ALMONDS.

14-lbs. White Sugar. 4 Pints Water.

Process.—Have thoroughly dry and warm starch powder; smooth off the trays and print with the almond moulds; boil the sugar and water in the usual way to the degree of thread, 230; lift the pan off the fire; let it stand a little to cool, then pour in, say half a pint of spirit, and immediately pull a cloth over the mouth of the pan, to prevent evaporation as much as possible. After a few minutes, stir the boil gently and commence to run out into the printed impressions in the starch trays. When the moulds are all filled, sift a little starch powder over the goods, through a fine wire or hair sieve, and remove the trays to the drying room, racking them in a warm place. In six or seven hours they should be crisp enough. This can be easily tested by pressing one between the finger and thumb; if ready, sift them out of the powder, blow them clean, then put them carefully in crystalizing tins, and cover with syrup, luke warm; let them remain all night; in the morning, drain off the superfluous syrup and spread them out on trays;

when dry, weigh and pack. Gin almonds are white, brandy tinged with saffron, rum light red, flavoured with the spirit or essence. If the latter, only a few drops are required to the boil.

ORANGE AND LEMON SLICES.

14-lbs. Sugar.	Orange Colouring.
4 Pints Water.	Essence of Lemon.
Essence of Orange.	Lemon Colouring.

Process.—Exactly as the last ; flavour when the sugar has been boiled ; halve the lot ; flavour and colour one part orange, the other part tinge with saffron and flavour with lemon. When the goods come out of the drying room, mix up some icing sugar with the white of an egg to a stiff paste, then, with an icing tube or paper cone, decorate the slices by running a thick thread round the edges and a little spot in the middle to represent the pip ; afterwards, crystalize as usual.

WEDDING RINGS.

14-lbs. Sugar. 4 Pints Water.

Colours and Flavours various.

Process.—Exactly as for brandy almonds, but with a variety of colours and flavours ; after the goods are sifted out of the starch powder, if required dotted, prepare the icing as mentioned in the last formula, and put about six little dots on each ring ; afterwards, crystalize.

LIQUEURS FOR MIXTURE.

28-lbs. Sugar. 8 Pints Water.

Colours, flavours, and shapes various.

Process.—Smooth off the trays and mould with mixed shapes in warm dry starch ; boil the sugar with the water a little higher than the other, so that they will stand a little rough handling, say 235 ; remove the pan from the fire and stir in the particular colour and flavour required, then run into the moulds ; when full, sift over them a little dry starch powder ; put the trays in the drying room ; in four hours, these goods should be crisp enough for crystalizing, which do in manner already described.

FONDANT CREAM WORK.

This branch of the business has developed wonderfully during the last few years. This cream is not only moulded and worked into every conceivable shape, size, colour, and flavour by itself, but is used with chocolate, fruits, &c., to make an endless variety of very pleasing and tasty confections. The smaller goods in this work form the body, and sometimes the whole, of many beautiful mixtures, and no window can now be considered orthodox unless they have a good display of these goods. For our purpose, the variety is a matter of detail, which we only mention to remind the reader that he must look for the greater part of it outside the covers of this guide. The process is practically the same all through; the mixings, flavourings, colours, and shapes make whatever distinction there is. It will only be necessary to give a fair selection of formulæ to enable the reader to imitate anything he sees in this line, or invent something new. I do not want to write for amusement, but instruction, nor want to waste the learners' time in reading repetitions, nor my own in writing them.

RASPBERRY AND VANILLA FONDANTS.

10-lbs. White Sugar. 3 Pints Water.
2½-lbs. Glucose. Carmine Colour.
Raspberry and Vanilla Flavour.

Process.—Boil the sugar, glucose, and water in the usual way to the degree of soft ball; then remove the pan from the fire; damp the pouring plate with cold water; pour the boil on it and let it remain until nearly cold. With a long palette knife or wooden spatula, commence to work the syrup until it changes to a white glossy cream; then divide the batch into two; put one part in pan and remelt it, just enough to make it a consistency to mould; add vanilla flavour and run it into the starch trays, which has already been impressed with fondant shapes; now put the other portion in the pan and remelt; colour it a a light pink; flavour with the essence of raspberry and mould in same shapes; when the goods are set and cold, sift them out of the starch and crystalize with cold syrup. N.B.—Have everything very clean when making fondants; every spec will show; a touch of blue will make the white a better colour.

CHOCOLATE AND VANILLA FONDANTS.

10-lbs. White Sugar.
2½-lbs. Glucose.
3 Pints Water.
½-lb. Pure Chocolate.
Vanilla Flavour.

Process.—Prepare the fondant creams as in last recipe ; when the boil has been creamed, divide into two, one part being twice the size of the other ; put the small portion in the pan to remelt, adding the chocolate paste ; stir until the paste is dissolved and incorporated, but do not let the cream boil ; remove the pan from the fire ; have the starch trays moulded fondant shape ; run the chocolate cream in, filling the impression only one third part full ; then remelt the white cream, flavour with vanilla, and fill up the moulds ; when set, sift out the fondants and crystalize in cold syrup ; each fondant will be in two colours, white, tipped with chocolate.

COCOANUT FONDANTS.

9-lbs. White Sugar.
2½-lbs. Glucose.
1½-lbs. Fine Desiccated Cocoanut, unsweetened.
3 Pints Water.
Lemon Flavour.
Carmine Colour.

Process.—Proceed to make the cream as before directed and divide the batch into two equal parts ; remelt one part and stir in half the desiccated cocoanut, with a few drops of lemon ; have the starch trays printed with fondant impressions and run them half full ; remelt the other portion of cream ; stir in the remainder of the cocoanut ; colour pink, adding a few drops essence of lemon, and fill up the impressions full ; crystalize in the usual way in cold syrup.

STRAWBERRY FONDANTS.

9-lbs. White Sugar.
2-lbs. Glucose.
2-lbs. Strawberry Jam.
3 Pints Water.
Carmine Colouring.

Process.—Boil the sugar, glucose, and water to a soft ball degree ; pour the batch on a pouring plate, which has been previously damped with cold water ; let the boil remain till nearly cold ; then with a wooden

spatula or palette knife, work the syrup about till it becomes creamy, then mix in the jam ; return the whole to the pan and remelt ; add sufficient colour to make a bright pink, then run into starch trays printed with suitable moulds ; when set, sift out the goods and crystalize in cold syrup.

CHERRY FONDANTS.

10-lbs. Sugar. 3 Pints Water.
2½-lbs. Glucose. Carmine and Saffron Colour.
Cherry Flavour.

Process.—Select some large preserved cherries ; cut them in halves. Boil the sugar, glucose, and water in the ordinary way to ball degree ; pour the batch on a damp pouring plate ; when nearly cold, work up the whole with spatula till it becomes a white glossy cream, working in the flavour at the same time, then divide into three equal portions ; colour one portion a bright pink and another a yellow, leaving a third white ; knead each portion into a stiff paste, adding a little icing sugar to make it tough ; pinch off small pieces and form them into balls about the size of a cherry ; make them a little flat on one side ; on this flat part stick a half cherry, squeezing them into shape ; place them in canvas trays and put them in the drying room for a few hours to harden ; afterwards, crystalize with cold syrup. These goods are usually packed nicely in laced boxes. Other preserved fruits, &c., may be used in the same way.

FONDANTS FOR MIXTURES.

10-lbs. White Sugar. 3 Pints Water.
2½-lbs. Glucose. Colours Various.
Flavours Various.

Process.—Boil the sugar, glucose, and water as before directed to a stiff ball, and pour the sugar on a damp slab ; let it stand till nearly cold, then work it up with spatula till a glossy cream ; divide the boil into as many portions as you want colours, then remelt this cream ; colour and flavour to fancy ; run the batch into starch trays, impressed with small

fancy moulds of different shapes (leaves, fruits, flowers, &c., are taken as pattern for moulds); when the fondants are set, crystalize in cold syrup. Fondants for mixture are made a trifle harder, to prevent being crushed with the other sweets with which they are mixed.

TO CRYSTALIZE FONDANTS.

13-lbs. Best White Sugar. · 4 Pints Water.

Process.—Boil this quantity of sugar and water for a few minutes, about 220 degrees by the thermometer; stand it aside undisturbed till quite cold. Pack the fondants in crystalizing tins, putting wire trays between each layer of say 2-in. deep; let the wire trays take a bearing on the ends of the tin; when the tin is full, cover the goods with the cold syrup, putting a damp cloth over the top; stand the tins in a cool place in the drying room, about ten hours, then remove them to a cold place, about an hour afterwards, take out the plugs and drain off the superfluous syrup; when the fondants are dry, turn the tins on end giving them a slight knock and empty them on clean trays; they will be ready for packing in an hour or two. N.B.—If a thin skim forms over the top of the syrup, skim it off before draining the goods—it may tend to granulate them, but the damp cloth ought to prevent this skim forming.

CHRISTMAS FANCIES.

There are a great number of fancies made from grain sugars, sold about Christmas time. Their beauty and attractiveness depends upon the moulds from which they are moulded, and the taste displayed in painting or decorating them. The goods themselves are quite a secondary consideration, being so simple to make; the small sorts, sold at a farthing, half-penny, and one penny each, and the smaller ones are moulded in starch powder. The shapes consist of pigs' heads, violins, slippers, dogs, cats, rabbits, and similar things; the troublesome plaster moulds being the chief obstacle (already referred to). The process is:—smooth off the trays and mould with a variety of fancy shapes. Boil

7-lbs. sugar, 1-lb. glucose, 2 pints water in the usual way to the degree of ball, 250 by thermometer ; remove it from the fire and rub the sugar against the side of the pan until thick and white ; stir it all together, then fill the moulds through the runner. Three or four trays will do well for fancies. Too much sugar must not be boiled at one time, or it will set before it can be all run into the moulds ; two or three pounds will be enough for a beginner to practice with. They will be hard enough to be taken out of the starch in fifteen to thirty minutes, according to size, after being run ; brush the starch powder off as clean as possible, and they will be ready for decorating.

ARTIFICIAL FIGURES.

Fruit, eggs, and any object may be taken from nature by this process. To be transformed into sugar, afterwards glazed and coloured, to imitate nature so exactly as to deceive many persons. These moulds must be made in two, three, or more pieces, so as to relieve freely without injuring the casting ; each part must fit together exactly ; for this purpose, make two or three marks or figures on the edges of the mould, to correspond with similar marks on the counterpart, so that the pieces to form each mould may be fitted with precision. Simple moulds in two pieces may be made by the workmen, such as eggs, apples, pears, &c., but where intricate objects are required, such as swans, baskets of fruit, &c., it is advisable to have them made by an experienced mould maker. Let the object from which you require the cast be partly embedded in soft pipe clay, or modeling wax, leaving so much of the mould exposed as you wish to form at a time (if in two pieces, say half), and oil it with sweet oil. Mix some plaster of Paris with water to the consistency of thick cream, and pour over the exposed half ; when this has set, turn the object over, embedding the half taken, and pour the plaster over the other half, the mould will be then complete ; with a pen knife, scrape out a hole at one end, into which the sugar may be poured. The moulds must be soaked an hour or so in cold water, previously to being used, which is better than oiling, as it keeps the sugar a delicate white. Boil the sugar in exactly the same way as directed in the previous recipe ; grain it and fill the moulds ; in a few minutes run

out as much sugar as will leave the mould ; this will cause the casting to be hollow in the centre. Colour your articles to imitate the natural objects which they represent with liquid colours and camel's hair pencils ; if a gloss is required, the colours should be mixed with a strong solution of gum arabic or isinglass to the desired tint.

TO DECORATE FANCIES.

This is done with various colours, put on with a camel's hair pencil or brush, the execution of which depends upon the ability of the artist ; also, with what is called in the trade, piping ; this is made by mixing fine powdered sugar with the white of eggs to a stiffish paste, which may also be coloured if required ; it is put on by means of small pipes or tubes made purposely (by machine makers) ; a stiff paper bag may be used for this purpose ; fold some writing paper in the form of a cone, similar in appearance to what grocers usually do small parcels of sugar and tea in ; the bag is filled with icing or piping ; the mouth of the bag is turned down to prevent the escape of the piping ; the point is then cut off with a pair of scissors or a sharp knife, to make a hole through which the icing passes to the goods. In using this bag, squeeze the sides together, when the icing will protrude from the small hole at the bottom. Some practice will be necessary before the learner can fully understand and work out this process satisfactorily. Some of the pipes which are used cannot be imitated by paper, the holes at the bottom having different devices, some fluted to form stars, while others are flat, which, when the icing is squeezed through, forms a tape, others form various descriptions of fancy work. Where any quantity of this work requires to be done, it is certainly cheaper and better to buy a set of tools, which are not very expensive, and are always ready for use.

FIGURE PIPING.

A good many fancies for the Christmas trade is made from an icing mixture. It would be impossible to give any idea of the process. The result entirely depends upon the dexterity of the workman. These

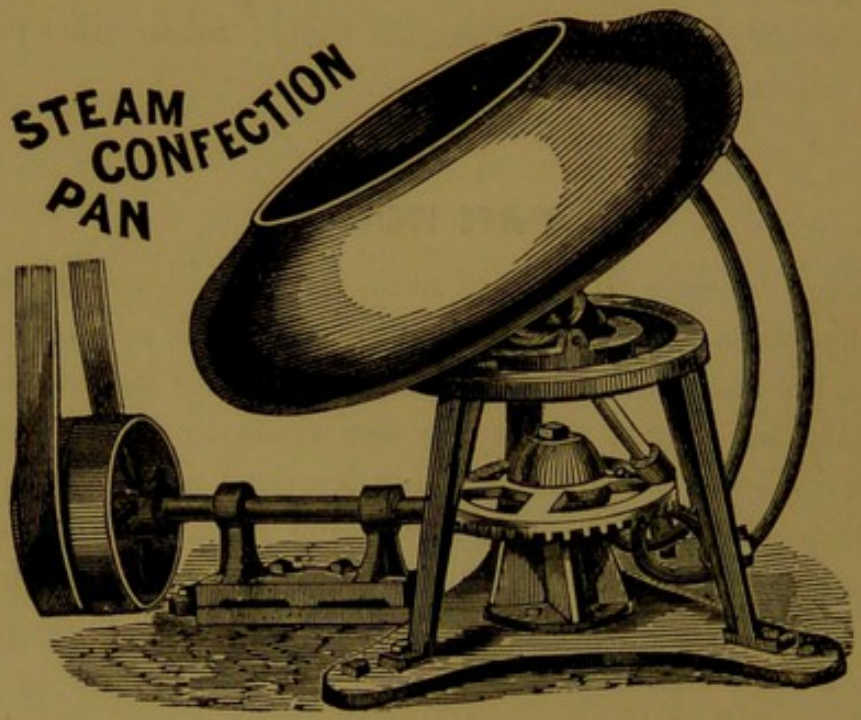
beautiful imitations of men and women in gaudy dresses, as well as representations of animals, &c., all more or less true to nature, are really worked up almost in the same manner as an artist would a drawing, the only difference is the artist uses his crayon and the confectioner his icing tubes. We can only assist the reader as far as giving the mixing for the icing used, and must leave the detail to the talent of the *would be*. These goods are mostly made by foreigners, the French being especially clever at it. Considering the prices at which they are sold wholesale, people must be wonderfully nimble with their fingers to make it pay. The ingredients are :—1-lb. icing sugar, the whites of two eggs, and two teaspoonfuls of thick gum mucilage ; beat up the egg whites with the gum, then mix the icing sugar gradually ; continue beating with a flat spatula until the icing will stand up to a sharp point ; a touch of blue will improve the white ; colour other portions to fancy as required.

PAN ROOM.

In this room is made all sorts of hard, round, oval, oblong, and other shapes, known in the trade as comfits. The method is one of the oldest known in the business. These goods have always held their own on the market, as against everything new made by a different process, although we have had innumerable alterations and improvements in the tools, machines, and appliances of the work, together with fresh ingredients for foundations and finish. Still, we adhere to the original process in all its essential details. In days gone by, these goods were made in a large copper pan, suspended from the ceiling by means of two chains attached to a bar with a hook and swivel in the centre. It was constructed so as to hang on a level with the workman's breast over an open furnace or charcoal fire. By this means, the pan was kept at a moderate heat, while the length of the chain allowed the workman to keep the pan on the swing, giving it a motion that the contents kept rolling about ; syrup was prepared in small pans with which the goods were, from time to time, coated ; the heat of the furnace and the friction caused by the motion of the pan grained the syrup, which covered the surface of the goods as each coat dried ; another was added, and so on, making the comfits gradually larger and larger, until the required size was attained, when the finishing touches

were given. This is a very slow, sing song, process, compared to what can now be done by steam power and steam pans. Formerly, a good day's work by an experienced confectioner would not be more than about half a hundredweight of finished goods per day. At the present moment a man could superintend half-a-dozen or more pans, turning out two or three tons per week.

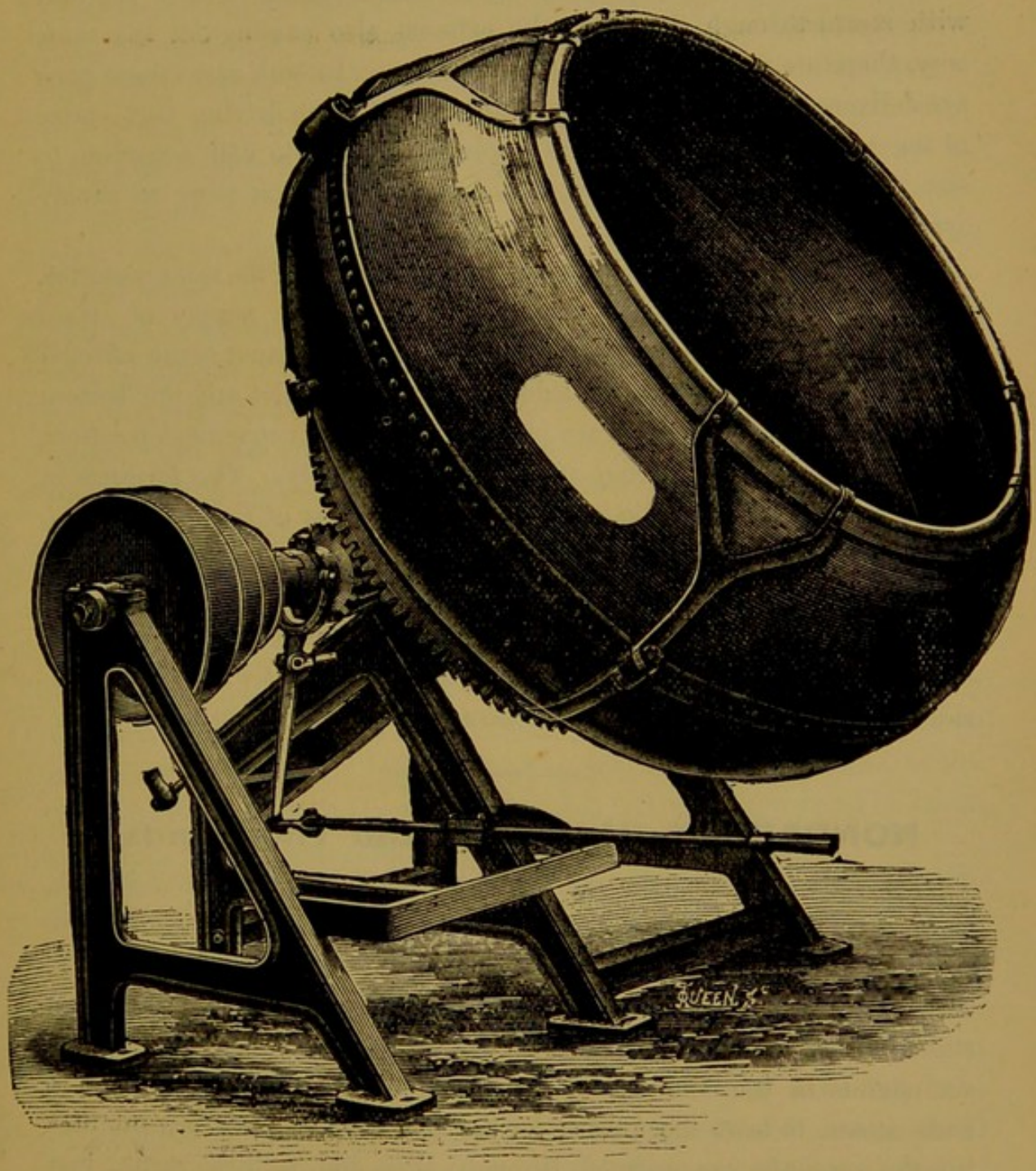
In face of these facts, it would be almost foolish for a small maker to try hand pans in the hope of being able to compete with others provided with requisite machinery, the cost of material and wages for labour would be more than the market price of the finished goods.



This pan is what is known as an oscillating pan, and the first to supercede the hand pan. It is made of copper, with a strong inside lining, which forms a steam chamber, into which the steam passes through a vulcanised rubber tube, the steam passes right round the pan and exhausts itself by passing out through another tube (both tubes are shown), the pan is thus heated, the temperature being regulated by steam cocks. It is worked by machinery, having a driving pulley attached to the main shaft, which passes along the ceiling and connected to a steam engine. The quick regular motion of the pan causes greater friction and the steady regulated heat of the steam keeps the

contents at a proper temperature, the goods made in them are more regular, and may be finished in a better style than could be done by the hand process.

REVOLVING PAN.



This is another and newer shaped pan for the same purpose. This one simply revolves and does not oscillate like the one previously described.

It is a question which pan does the best work, some workmen prefer one, some another ; both have their merits and drawbacks, but to judge from sales and preferences, the revolver is the favourite ; in fact, many newer houses have nothing else, while the older makers, adding to their plant, in most cases, select the latter. Where large quantities are required no doubt the big revolver is on the job. The pan itself, like the other, is made of copper, having a steam chamber, but is supplied with steam through the shaft, the exhaust also passing out the same way, therefore no rubber tubes are necessary. In both cases these pans are delivered by the makers complete, ready for the driving belt—price of the oscillating about £30, the revolver from £40 to £56, according to size. The sugar is generally melted in small steam pans to supply syrup for coating.

This syrup pan is made of copper having a jacket of the same material. Between the jacket and the pan, space is left for a supply of steam for melting and boiling purposes, the supply and exhaust being affected by means of taps fixed at the side of the pan for inlet and the bottom for waste. The syrup pans are placed in the most convenient position, close to the comfit pans they are intended to supply. The formulæ in this branch will be of little interest to the majority of readers, because, as a rule, the firms who go in for pan work are either themselves or have in their employ experienced confectioners, at the same time it would be unwise to ignore altogether such an important department ; besides, in my former books, much information which I thought was almost outside my purpose has been of great benefit, especially abroad.

NONPAREILS (Hundreds and Thousands).

These small comfits make the foundation for nearly all round work, such as rifle balls, rainbow balls, and round marbles of any size. First sift some powdered sugar through a wire sieve (40 holes to the inch) ; then again sift what comes through in a lawn sieve, to separate all the fine dust ; use what is left in the lawn sieve ; put, say four or six pounds in the comfit pan ; set the pan in motion, and turn on a little steam to heat the sugar ; let the pan revolve for a few minutes till the contents are warmed through, then add a little syrup, just enough to wet ; while the pan is turning round, put your hand in and rub them about to keep the particles from sticking together while wet ;

when they get dry and free, add a little more syrup ; again rub them about, and repeat the process over and over again ; see that each coat of syrup is dry before adding another, also that the goods are separate and quite free. If they couple, it is almost impossible to separate them ; being so small, careless work will show when they become larger, as they will be of very irregular in shape and out of proportion in size ; when brought up to the size required, if wanted for nonpareils, take out three parts of them and stand them aside ; melt some best sugar to a thin syrup, adding a pinch of blue ; give the goods left in the pan a coat or two of it, then gradually turn off the steam until the pan runs quite cold ; while the pan is getting cold, keep adding a little syrup, as the goods get dry (not too much) ; then let the pan run dead cold for some little time without adding any syrup ; in this way you will finish a nice white ; then stop the pan and pack the nonpareils on trays. Now put in another portion of the unfinished goods ; start the pan and turn on the steam ; when they get warm, colour a portion of the syrup yellow ; give them a few coats at intervals until they show a decided colour, then turn off the steam, letting them get gradually cold, still adding a little yellow syrup ; when quite cold, let the pan run for a little time until the sweets are dry and comparatively hard, then stop the pan and take them out. Put in another portion ; colour the syrup red and finish in the same way, and still another, and finish a light blue, and so on, according to the number of colours required ; when all is finished, mix together and they are then ready for sale. Should the nonpareils be wanted for bottoms for larger balls, of course, no colouring will be required until they have reached the size you want ; in that case, as the goods increase in bulk, the pan will get too full, a portion must be taken out, from time to time, and put aside for stock bottoms.

GREEN PEAS AND CORAL BEADS.

These goods are raised from the nonpareils as described in the foregoing formula ; put any quantity of bottoms in the pan. Start it to run and turn on the steam ; put on coat after coat of syrup until they have come up to the size of a pea, then use best syrup, colour it green ; make the shade to represent nature as near as possible ; give the goods several wettings with the coloured syrup ; when you see them come to colour, shut off the steam ; add a few more coatings a little thinner ; as they

become cold, stop the supply of syrup and let the pan run until they are dry, when they are finished. Coral beads and red currants are made in exactly the same way. The art lies in the colour and finish, striking the shades and finishing clear. This is done by regulating heat, lowering it gradually, thinning off the syrup, and putting in just the quantity at proper intervals, running the pan until the goods are cold and dry enough to prevent spotting and specking.

RIFLE BALLS.

Process.—They are raised in the same way as green peas; the syrup may be used thicker, but not too thick, or they will go out of shape; the pan is kept pretty hot until they are nearing the size wanted. Then commence to thin off the syrup and look to the finishing; when brought fairly nice and smooth, take them out of the pan and divide them into as many portions as you want colours; put those for white in the pan first and finish off with syrup made from best sugar, then work the yellow, then the orange, then the red; working them this way the pan does not require so much cleaning, as the light colours used first will not harm the darker ones; the mauve and blue shades are used last. Rifle balls are made in all sizes; the process is the same, only that the very large ones are taken out of the pan once or twice and put in the drying room to harden during the operation.

CHING CHANGS.

Process.—They are made and finished in exactly the same way as rifle balls; when finished, take out of the pan; have a changing board, which is usually a roughly constructed tool, consisting of a square frame in which strips of wood are fixed edgeways, a quarter to half-inch apart (according to the size of the marble); the edges of the wood are coloured and the balls are run down them, making two coloured rings round each. These goods were at one time very popular, and now sell fairly well.

ANISEED BALLS.

Process.—Same as for rifle balls, but the syrup is made from common

sugar and flavoured with a little oil of aniseed. The shades of colour vary with different makers, but are all of a reddish brown.

BIRDS' EGGS.

Process.—Sift four pounds of mogador or other good caraways, free from dust; put them in the pan; turn on a little steam and set the pan in motion; when the seed warms put on a little thin solution of gum, just enough to wet them, then throw them about with the hands to separate them, adding a dust of dry flour; when dry, wet them with a little thin syrup; keep moving them about with the hands; see they are parted; when the first coating of sugar is dry, add another, and so on; when they begin to get large, the sugar may be used thicker and more steam turned on the pan until they get nearly the required size, when the steam should be slackened and the syrup thinned; when they look fairly well and dry, take them out of the pan; divide them into lots for colouring. Now wash the pan out; prepare some finishing syrup; replace the portion for whites first in the pan; start it and turn on a little steam; use the syrup sparingly; let each coat dry before adding another; gradually reduce the supply of steam till the pan is quite cold and finish an opaque white; a pinch of blue in the syrup will improve it. Now use another portion and colour the syrup to fancy, finishing in a like manner, and so on, until they are all coloured. These goods are usually sold spotted; to do this, spread them on trays and take a short, coarse haired paint brush in the right hand, dip it in some liquid colouring and strike it lightly against a stick, held in the left hand, over the goods, the spots will fly off on the comfits; when different colours are used and carefully put on, the result is very pretty.

CARAWAY COMFIT.

Process.—Follow the last formula by sifting the seeds, then putting them in the pan; wet with thin gum; dust with flour and syrup to size. *Scotch Carvie* is made very small (all white), English Caraway much larger (pink and white, sometimes pink, white, and yellow).

CORIANDER COMFITS.

Process.—Put 4-lbs. of sifted coriander seeds in the comfit pan; start

the pan in motion ; turn on a little steam, when the seeds are warm, put on a thin coating of gum mucilage, then a dust of flour ; use the hands to keep them free, then coat with syrup until they reach the required size ; finish as already directed. These goods are usually made all white and are used largely for mixtures, plain and purled. Some raise the rifle balls from these seeds. In the latter case they are coloured, of course. Corianders are also purled by the same process as for cinnamon comfits, when used for Scotch mixtures.

CINNAMON COMFITS.

Process.—Take 4-pounds of cinnamon or *cassia lignea*, which is a cheaper sort ; soak in water for a few hours to soften, then cut up in pieces, about one inch long and very narrow, with a pair of scissors or machine, which is made for this purpose ; put them in the drying room till hard, then remove them to the comfit pan ; start it in motion and turn on the steam ; when the sticks are warm, give them a coating of thin liquid gum and a dust of flour ; use the hands to feel they are free ; give them a few coatings of syrup, then put on the remainder and finish through the purling pot, *i.e.* a small vessel made like the top of a funnel used to fill bottles, having a small hole at the bottom, in the centre. An iron rod runs down the middle of the funnel, having its point to fit in the hole. This rod is moveable, being fixed with a screw, so as to regulate the supply of syrup through the funnel. This arrangement is suspended over the centre of the pan and is kept full of syrup, which is allowed to run over the goods as the pan revolves, the thickness of the syrup being regulated by the iron rod. Keep the pot well supplied with very hot syrup during the operation and the pan revolving slowly at a good heat, so that the sugar, which is dripping on the cinnamon sticks, will dry instantly, which gives that nice white, rough appearance.

COMFITS WITH BOILED CENTRES.

A great variety of pan goods are made from boiled centres. Rollers are made by machinists to produce shapes for this purpose. Some of them are very pretty. In this way bulk is produced much quicker and cheaper. The boilings intended for pan bottoms are made in the same way as directed for boiled sugars. The sugar should be boiled very

high and no more glucose or cream of tartar used than is necessary to cut the grain, otherwise the finished goods may become damp and soft. The sugar bottoms are worked up, coloured, and finished in the same manner as seeds.

COCOANUT PERFECTIONS.

Process.—Take any quantity of desiccated cocoanut, unsweetened ; mix with it a thin solution of gum and work it into a firm, stiff paste, well binding the cocoanut ; cut off pieces and roll them into lengths a little thinner than a lead pencil ; dust them well with icing sugar and stand them close together on a slab, then saw them into pieces about ½-in. long with a thin, sharp knife ; pack them on canvas trays and put them in the drying room till hard and dry, then put them into a cold pan ; work round them carefully a coating of thin gum and flour ; sift them out of the pan and put them again on trays to harden in the drying room ; when dry, replace them in the comfit pan ; give them three or four coatings of cold syrup ; between each coating throw in a handful or two of dry sherbet sugar, then let them revolve till dry (all this time with a cold pan) ; now turn on a little steam and, when the goods have warmed, give them two or three more coatings of syrup, but no more dry sugar ; now shut off the steam and give them a further wetting or two and finish in a cold pan ; take them out on clean trays and put them in the drying room till hard and firm. If wanted coloured, the last wetting or two would be with coloured syrup.

The goods are a little difficult and troublesome to make, but look very pretty if well done ; they are comparatively new, and of Yankee origin.

SUGARED ALMONDS.

Process.—Pick and clean 20 or 30 pounds of well-shaped almonds, Jordans, Valencias, or sweet Barbary's ; put them in the pan ; start it revolving and turn on the steam till they get warm, then give them a wetting of liquid gum ; rub them about with the hands till they are all damp ; throw in a handful or two of flour amongst them and keep them moving till they are dry ; when dry, take them out and spread on trays ;

put them in the drying room for, at least, twelve hours ; see that the gum and flour has covered them all over, especially at the points, or they will finish with broken tips, or what is known as pointed. When taken from the drying room, put them again in the comfit pan ; start the pan running and turn on the steam ; when the almonds get warm, put on a little syrup ; when that drys, renew the quantity with a dust of flour ; examine the almonds from time to time, by lifting a handful out of the pan, and see that they are taking the syrup all round, if not, pick out the faulty ones (to be gummed again with the next batch) ; bring up the others by repeated coatings of syrup and finish off with best thin syrup and a cool pan. N.B.—Always have the goods and pan cool when colouring. Never leave the finished goods in the pan when dry, or they may sweat and show white marks when separated. The colouring process should not take too long. From half-an-hour to forty minutes is about the time.

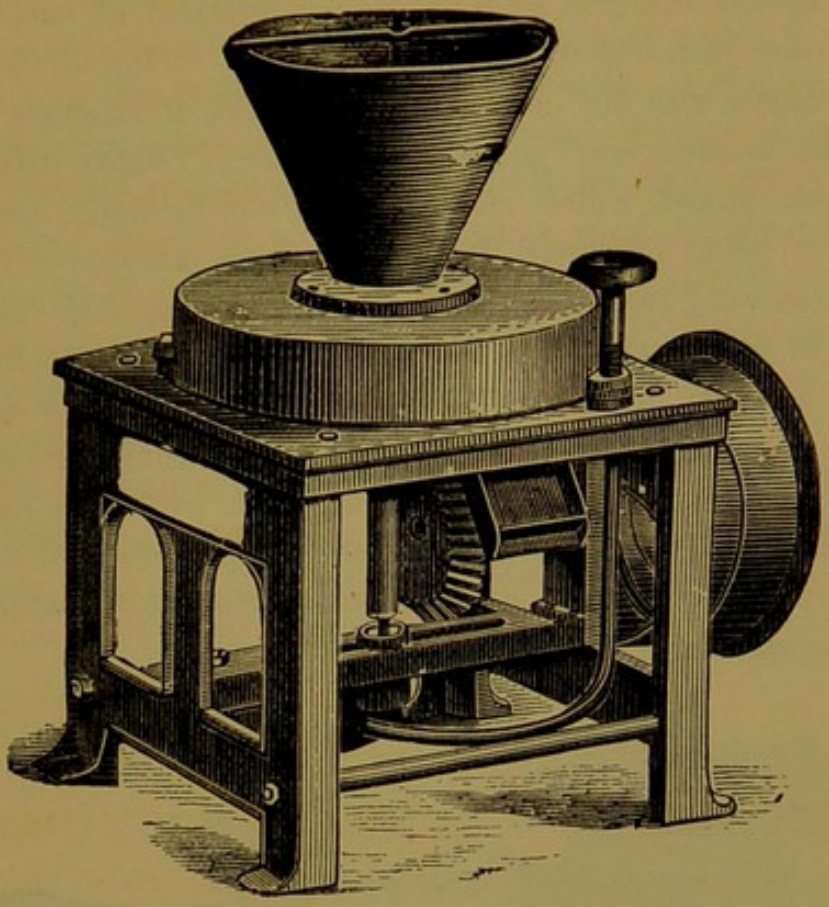
PAN GOODS WITH LOZENGE BOTTOMS.

A good many bottoms are made from lozenge paste, such as Victorias, &c. They should be perfectly dry and hard before putting in the pan, or they will run out of shape and couple when they get warm. Use with first coatings of syrup the flour freely ; do not have the pan very hot until they are well in shape and the first coating dry on them. Work off in the usual way.

GLAZING PAN GOODS.

Process.—The goods to undergo the process of glazing must have been finished as if for sale. Have the pan clean ; put in the goods ; set it in motion and turn on steam enough just to warm them, then drop in a cake or two of hard white wax ; let them run round until they have taken a finely polished surface, then shut off the steam and let the pan revolve till the goods are nearly cold. At no time must they be hot, or they will not take the gloss. In pan work, as in other departments, too deep colours should be avoided ; the lightest shades and tints are prettiest and, when mixed, look delicate and tempting.

SUGAR MILL, FOR STEAM POWER.



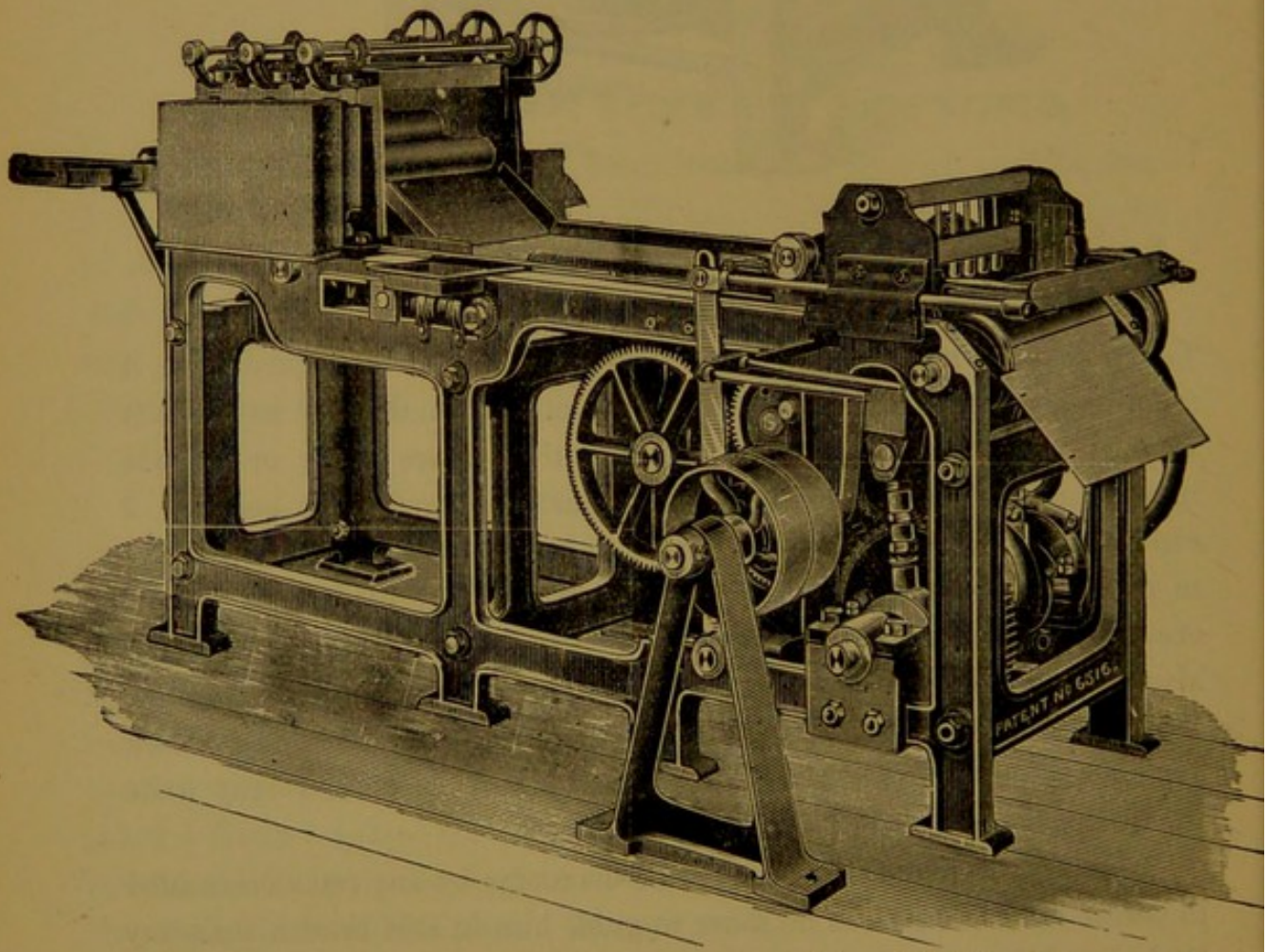
LOZENGE MAKING.

The process of making dry goods is very simple, at the same time, it requires experience and a good deal of practice to enable one to tell just when this and that is right, or to add a little more sugar or a little more liquid, in order to make the batch just the consistency needed. I can assist the learner only by telling him how I should do this in order to make that, but many little unforeseen and unprovided for events occur, especially to beginners, to mar their progress which does not always occur to one at the moment of writing. It is impossible for me to infuse into the brain and muscle that dexterity and acuteness which experience and practice alone will impart, however plain I may write the directions.

I see no obstacle which may not be overcome by any one determined to succeed, even if he has no more to guide him in this branch than my book, in addition to his own reason and common sense.

This branch (with the exception of the cream lozenge) would only

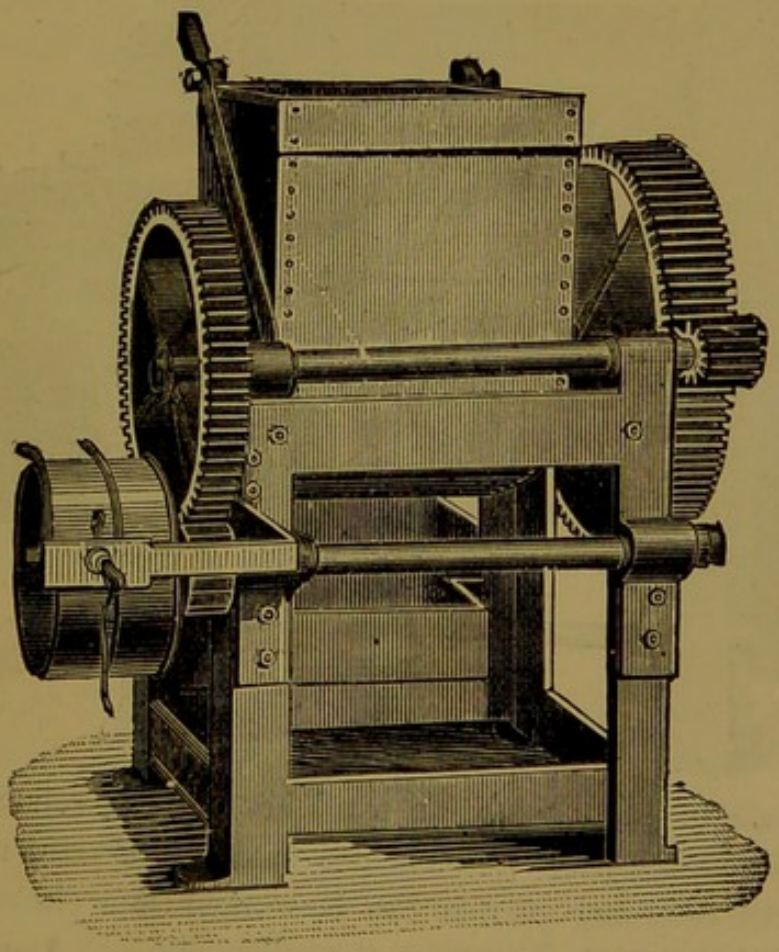
be important to small makers who have a wish to make up their own recipes for special lozenges, such as cough, medicated, or something out of the ordinary run, unless they were prepared to lay down plant in order to compete with big makers. The making of lozenges by hand, as far as the common sorts go, is a dead letter. Twenty years ago the lozenges were mixed, rolled, stamped, and cut by hand, journeymen confectioners being employed for this purpose, assisted by boys or women. Generally speaking, more men were employed in this department than in any other. It is not so now. Like in the comfit room, machinery has been introduced and abolished the need for assistants. The latest arrangements in this way mixes, rolls, prints, and cuts automatically. At first, they worked a little rough, but at the moment of writing the engineers have so perfected their appliances that everything works smoothly, turning out goods almost perfect at a fraction of the cost for manual labour.



The latest machine of this kind I have seen is called the Climax. I think it embraces almost every improvement, being fitted with pinning,

printing, and embossing gear. To this machine is attached a patent friction pawl for working the pinning motion. By this, the skip can be altered without stopping the machine and can be adjusted to an exact skip, which cannot be done with ratchet wheels. I believe this is the only machine so fitted. The embossers can be made to emboss any design. The scrap delivery plate is adjustable and can be altered to prevent drag. The machine also cuts rings, which formerly had always to be cut by hand. The printing block is fixed so near the cutters that the lozenges do not get out of truth, consequently the printing is exact and in the proper place. The goods are delivered direct on the trays. This apparatus turn out, per day of ten hours, from two or three tons of lozenges—price from £250 to £300. I should have liked to have shown a better drawing of this magnificent piece of engineering skill, but it is too large and complicated to give anything like an intelligent view of it on these small pages.

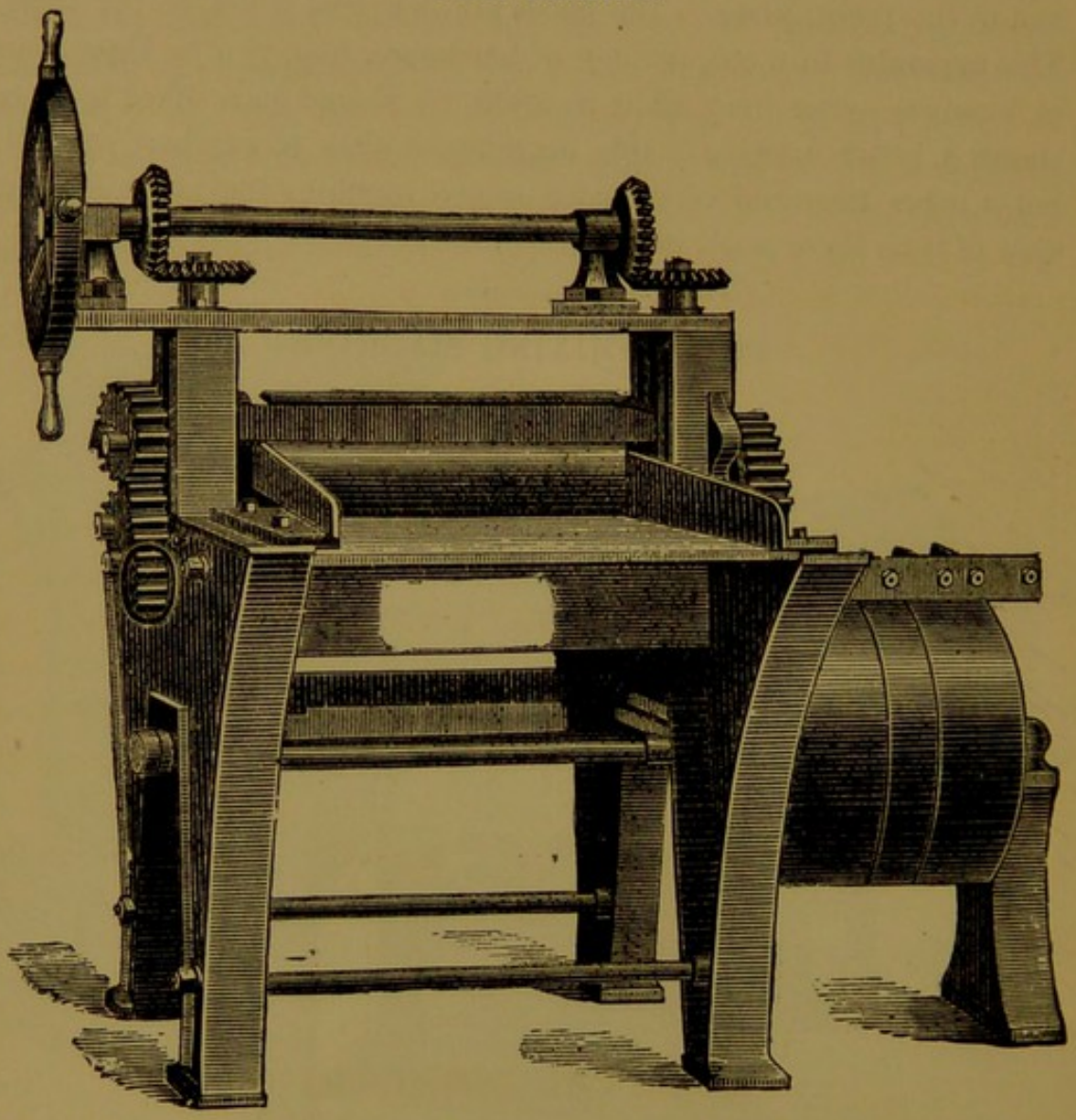
DOUGH MIXING MACHINE.



The luxury of making lozenges by machinery does not end with the

machine principal—mixers and brakes must be used to provide sufficient paste to keep it employed. The above shows a mixer. The inside is covered with brass, the arms or beaters of gun metal. Studs are fixed at the bottom. The arms are double and set at angles—this prevents the paste from getting into a lump and ensures a thorough mixing in about eight minutes. They are made in different sizes.

THE BRAKE.



This shows a brake or kneading machine, made of solid brass. The plates on which the paste works is also made of the same material. It is fitted with reversing gear, so can be worked from either side. The scraper which is attached, scrapes the rollers clean. A small machine of this kind will thoroughly knead 20 cwt. per day, attended to by one

girl. These machines are useful, where a moderate quantity is required, even where the larger lozenge machine is not used. I have perhaps said enough to show how a small maker would be handicapped by his bigger brethren with the apparatus at command. However, as I already mentioned, where special mixings are required, for which a special price can be got, the old-fashioned method would come in and the following instructions prove useful.

However simple our process is, we must have some tools. We cannot do without a sugar mill to grind the sugar, the old method of pestle and mortar being out of the question. These sugar mills are made in various sizes, at prices from £10 to £50. A small one would do for a decent trade. They are simple in construction, easily taken to pieces, and are regulated by screws, so that the sugar may be ground coarse or fine as required. There are several other purposes besides lozenge making for which ground sugar is required, such as sherbet, icing, drop dusting, &c., making the sugar mill a useful tool to both confectioners and pastry cooks. The larger sizes are fitted with fast and loose pulleys to be worked by steam power. The other tools necessary are two marble slabs, one to mix on, the other on which the paste may be rolled out in a sheet the thickness required, and also for cutting, the size of slab, say 4-ft. by 2-ft. 3-in. or larger, with polished surface ; a brass rolling pin, about 2-ft. long, fitted with moveable gauge to regulate the thickness of the sheet ; a palette knife, about 18-in long ; a soft hand brush ; a box containing starch powder ; cutters of various sizes and shapes ; stamp and dyes for motto lozenges, &c. These are the special tools, but we shall also require trays and other odds and ends in a general way. The trays should be made of good dry pine, say about 3-ft. long, 2-ft. wide, and an inch deep. The timber should be a full half-inch thick when plained.

GENERAL DIRECTIONS.

A FIRST-CLASS lozenge is composed of best ground sugar, mixed with a mucilage, made from gum arabic or tragacanth. The finer the sugar is ground the more opaque and smooth the lozenge will be when finished. If a rough or transparent lozenge is required, such as fruit or cocoanut, the sugar should be ground coarse. This is known in the trade as grip

or wire sugar. Dissolve the gum in hot water, in the proportions of one pound of gum or two pounds of water ; if the gum be broken up small, about twelve hours would be sufficient to reduce the whole to a liquid, then strain it through a fine cloth. Put the sugar in a heap on the marble slab ; make a bay in the centre, into which pour in the gum mucilage, then commence with the palette knife to gradually work in the sugar from the edge, just as if you were mixing up flour and water for bread for the oven ; if for white lozenges, add a pinch of blue to bleach the colour. During the process, if it kneads too dry and crumbly, add a little more gum, or if too sticky, a little more sugar. For coloured goods, such as ginger, rose, musk, &c., add the colour and flavour with the gum, so as to be thoroughly incorporated during the process of mixing. When the paste gets very stiff, cut a portion off and roll it out into a sheet ; put the gauges on the rolling pin, that it may come to the proper thickness, lifting the sheet up two or three times and dusting a little starch powder under it to keep it from sticking to the slab ; during the operation, turn it over three or four times with the knife and roller ; dust over the face of the sheet a powder composed of half starch powder and half ground sugar ; rub the sheet well with the ball of the hand to give it a smooth surface ; use the brush freely to face it up ; handle it as little as possible ; commence to cut by taking a straight line over the left near the edge and, however slowly, continue to work in parallel lines ; keep the cutter clean and empty it often into trays, which have been dusted with starch powder. A cheap mucilage is made up of glucose and gelatine with gum which we shall mention in turn.

Should any readers attempt to make lozenges from these instructions, begin with cough, as the usual colour of them will not show the defects ; at any rate, do not attempt white goods, or the result will surprise you—instead of a white you will, ten to one, get a dull sort of a dusty drab, which is the result of too much handling in preparation.

PEPPERMINT LOZENGES.

14-lbs. Powdered Sugar. ½-oz. Oil of Peppermint.
1 Quart Gum Mucilage.

Process.—Put the powdered sugar in the middle of a marble slab ; make a bay in the middle of the heap ; pour in the gum mucilage and flavour ; add a pinch of blue ; work the whole up to a stiff paste ; roll

out portions into sheets to required thickness with gauged rolling pin; rub the ball of the hand lightly over the face of the sheet to smooth it; now brush over the surface with hand brush and cut into lozenges with round cutter. Peppermint lozenges are made in many sizes and thickness; put the goods on trays and stand in drying room till crisp and hard.

EXTRA STRONG PEPPERMINT LOZENGES.

7-lbs. Icing Sugar. 1-oz. Oil of Peppermint.
1 Pint Gum Mucilage.

Process.—Work together the sugar, gum, and flavour, with a pinch of blue into a stiff paste; roll out into sheets and cut with round cutter; pack into trays and stand in drying room till hard. The time required in drying room depends on the thickness of the goods. N.B.—Extra strongs are usually so stamped, which is done after the lozenges are cut and spread on trays. They differ in quality according to the quantity of mint added. For very best, Mitcham mint is used; for the other, American oil of peppermint.

MUSK LOZENGES.

1 Drachm Best Musk. 28 lbs. Lozenge Paste.
6-oz. Lime Water. Carmine Colouring.

Process.—Bruise the musk and mix it with the lime water; put it in a vessel and let it stand in hot water for twenty-four hours; mix with the above quantity of lozenge paste (prepared as already directed); colour with carmine and cut with small round cutters; stamp each lozenge, musk. If an essence of musk be used, the lime water must be omitted.

MUSK LOZENGES.

1 Drachm Pure Musk in Powder. 28-lbs. Lozenge Paste.
½-oz. Tartaric Acid. Carmine Colouring.

Process.—When preparing the paste, work in the powdered musk and acid together, with sufficient colour to give the batch the usual tint; roll out in thin sheets and cut with oval or round cutter. A better quality is made by using more flavour and are stamped musk.

MUSK LOZENGES (Common).

28-lbs. Icing Sugar. Essence of Musk.
Gum Mucilage. Carmine Colour.

Process.—Prepare the paste as usual ; roll out thin and cut with round cutter. It is hardly possible to give exact quantities of flavouring for the common musk lozenge now sold. Essence of musk, natural or artificial, is used, and that so sparingly, that it would be difficult to tell what they were flavoured with.

ROSE LOZENGES.

14-lbs. Lozenge Paste. ½-oz. Tartaric Acid.
1 Drachm Virgin Otto of Roses. Carmine Colour.

Process.—Prepare paste in usual way ; add sufficient colour to make batch a light pink ; roll out the sheets thin ; cut with small cutters and stamp rose.

ROSE LOZENGES (Common).

28-lbs. Lozenge Paste. ½-oz. Artificial Otto of Roses.
Carmine Colouring.

Process.—Like musk lozenges, these goods are flavoured and coloured according to price, the process of course is the same.

GINGER LOZENGES.

14-lbs. Lozenge Paste. ¼-oz. Essence of Lemon.
½-oz. Jamaica Ginger, powdered. Yellow Colouring.

Process.—As usual ; mix ingredients thoroughly together. Better or common qualities by adding more or less ginger.

CAYENNE LOZENGES.

14-lbs. Lozenge Paste. Otto of Roses.
½-oz. Best Extract of Cayenne. Carmine Colouring.

Process.—As usual, cut out with round, oval, or octagonal cutter.

COUGH LOZENGES, No. 1.

14-lbs. Lozenge Paste. ½-oz. Oil of Aniseed.
1-lb. Block Juice. 1-oz. Tolu.
1 Drachm Morphia.

Process.—As usual ; cut with small round, oval, or octagonal cutter, 40 to the oz. N.B.—Lozenges containing morphia or other schedule poisions, strictly speaking, should only be sold by chemists.

COUGH LOZENGES, No. 2.

14-lbs. Lozenge Paste. 1-oz. Ipecacuanha Powder.
1-lb. Block Liquorice. ¼-oz. Oil of Aniseed.
1 Drachm Morphia.

Process.—As usual ; cut with small oval cutter.

COUGH LOZENGES, No. 3.

14-lbs. Lozenge Paste. 1-lb. Block Liquorice.
1-oz. Essence of Cough Drop.

Process.—As usual ; cut with oval cutter, and stamp. This is a very good lozenge. N.B.—If the colour is not deep enough to fancy, work in a little brown colouring.

CINNAMON LOZENGES.

14-lbs. Lozenge Paste. ¼-oz. Oil of Cinnamon.

Process.—Mix thoroughly ; some colour a pale brown, others a shade of red.

MAGNESIA LOZENGES.

14-lbs. Lozenge Paste. 1½-lbs. Magnesia.
Oil of Cassia Flavour.

Process.—Before adding the gum to the paste, mix the sugar and magnesia together and sift them, then add the gum and oil of cassia ; cut with round cutter.

TOLU LOZENGES.

14-lbs. Lozenge Paste. 2-oz. Tolu, dissolved in Spirits of Wine.

PROCESS.—As usual ; cut with oval cutter.

LAVENDER LOZENGES.

14-lbs. Icing Sugar. ½-oz. Oil of Lavender.
1 Quart Gum Mucilage. Lavender Colouring.

PROCESS.—Mix ingredients thoroughly together ; roll out in thin sheets ; cut with fluted cutter.

ANISEED LOZENGES.

14-lbs. Lozenge Paste. ¼-oz. Oil of Aniseed.
Extract of Liquorice.

PROCESS.—As usual ; use as much liquorice as will make the batch brown.

IPECACUANHA LOZENGE.

14-lbs. Lozenge Paste. ½-oz. Ipecacuanha Powder.
1-oz. Tartaric Acid. 10 Drops Otto of Roses.

PROCESS.—As usual ; cut with small octagonal cutter.

CHALK LOZENGES.

7-lbs. Icing Sugar. ¼-oz. Powdered Nutmeg.
¾-lb. Prepared Chalk, powdered. 1 Pint Gum Mucilage.

PROCESS.—Sift the sugar, chalk, and nutmeg together, then add the gum and make a paste in the usual way ; cut with small cutter.

LETTUCE LOZENGES.

7-lbs. Lozenge Paste. 4-oz. Extract of Lettuce.

PROCESS.—As before directed.

PAREGORIC LOZENGES.

14-lbs. Lozenge Paste.
1-oz. Tincture Paregoric.
1-oz. Tartaric Acid.
Carmine Colour.

PROCESS.—As usual.

ANTI-ACID OR HEARTBURN LOZENGES.

10-lbs. Icing Sugar.
½-lb. Prepared Chalk.
4-oz. Magnesia.
20 Drops Oil of Cinnamon.
Gum Mucilage.

PROCESS.—Mix by sifting the icing sugar, chalk, and magnesia together dry, then add the gum and cinnamon to make a stiff paste; roll out in thin sheets; cut with small cutter.

NITRE LOZENGES.

14-lbs. Lozenge Paste.
4-oz. Powdered Nitre.
Lemon Flavour.

PROCESS.—Work in the flavours, making a stiff paste; roll out thin; cut into lozenges with oval cutter.

QUININE LOZENGES.

7-lbs. Lozenge Paste.
¼-oz. Sulphate of Quinine.

PROCESS.—As usual; oval cutters.

ANTI-BILIOUS LOZENGES.

8-lbs. Lozenge Paste.
6 Drachms Turkey Rhubarb.
6-oz. Magnesia.
1½-oz. Carbonate of Soda.
20 Drops Oil of Cinnamon.

PROCESS.—Thoroughly mix in the ingredients as usual; cut with small cutter.

LONG LIFE LOZENGES.

8-lbs. Lozenge Paste.
½-oz. Turkey Rhubarb.
4-oz. Jamaica Ginger, powdered.

PROCESS.—As usual.

OFFICIAL RECIPES
OF THE
BRITISH PHARMACOPŒIA.

BENZOIC ACID LOZENGES.

Benzoic Acid, 360 grains.
Refined Sugar, in powder, 25 ounces.
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, 2 fluid ozs.
Distilled Water, a sufficiency.

Mix the benzoic acid, sugar, and gum; add the mulicage and water to form a proper mass; divide into 720 lozenges, and dry them in a hot-air chamber at a moderate temperature. Each lozenge contains half a grain of benzoic acid. Dose: 1 to 5 lozenges.

TANNIC ACID LOZENGES.

Tannic Acid, 360 grains.
Tincture of Tolu, ½ fluid ounce.
Refined Sugar, in powder, 25 ounces.
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, 2 fluid ozs.
Distilled Water, 1 fluid ounce.

Dissolve the tannic acid in the water; add, first the tincture of tolu, previously mixed with the mucilage, then the gum and the sugar, also previously well mixed. Form the whole into a proper mass; divide it into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains half a grain of tannic acid. Dose: 1 to 6 lozenges.

BISMUTH LOZENGES.

Subnitrate of Bismuth, 1,440 grains.
Carbonate of Magnesium, 4 ounces.
Precipitated Carbonate of Calcium, 6 ozs.
Refined Sugar, 29 ounces.
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, 2 fluid ozs.
Rose Water, a sufficiency.

Mix the dry ingredients, then add the mucilage, and form the whole into a proper mass with rose water; divide the mass into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains 2 grains of subnitrate of bismuth. Dose: 1 to 6 lozenges.

CATECHU LOZENGES.

Catechu, in powder, 720 grains.
Refined Sugar, in powder, 25 ounces.
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, 2 fluid ozs.
Distilled Water, a sufficiency.

Mix the catechu, sugar, and gum, and add the mucilage and water to form a proper mass; divide into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains one grain of catechu. Dose: 1 to 6 lozenges.

REDUCED IRON LOZENGES.

Reduced Iron, 720 grains.
Refined Sugar, in powder, 25 ounces.
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, 2 fluid ounces.
Distilled Water, 1 fluid ounce or a sufficiency.

Mix the iron, sugar, and gum, and add the mucilage and water to form a proper mass; divide into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains one grain of reduced iron. Dose: 1 to 6 lozenges.

IPECACUANHA LOZENGES.

Ipecacuanha, in powder, 180 grains.
Refined Sugar, in powder, 25 ounces.
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, 2 fluid ounces.
Distilled Water, 1 fluid ounce or a sufficiency.

Mix the powders and add the mucilage and water to form a proper mass; divide into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains a quarter of a grain of ipecacuanha. Dose: 1 to 3 lozenges.

MORPHINE LOZENGES.

Hydrochlorate of Morphine, 20 grains.
Tincture of Tolu, ½ fluid ounce.
Refined Sugar, in powder, 24 ounces
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, a sufficiency.
Distilled Water, ½ fluid ounce.

Dissolve the hydrochlorate of morphine in the water; add this solution to the tincture of tolu, previously mixed with two fluid ounces of the mucilage; then add the gum and sugar, previously mixed, and more mucilage if necessary, to form a proper mass; divide into 720 lozenges,

and dry these in a hot-air chamber at a moderate temperatute. Each lozenge contains one thirty-sixth of a grain of hydrochlorate of morphine. Dose : 1 to 6 lozenges.

MORPHINE and IPECACUANHA LOZENGES.

Hydrochlorate of Morphine, 20 grains.
Ipecacuanha, in fine powder, 60 grains.
Tincture of Tolu, ½ fluid ounce.
Refined Sugar, in powder, 24 ounces.
Gum Acacia, in powder, 1 ounce.
Mucilage of Gum Acacia, a sufficiency.
Distilled Water, ½ fluid ounce.

Dissolve the hydrochlorate of morphine in the water ; add this solution to the tincture of tolu, previously mixed with two fluid ounces of the mucilage ; then add the ipecacuanha, gum, and sugar, previously mixed, and more mucilage if necessary, to form a proper mass ; divide into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains one thirty-sixth of a grain of hydrochlorate of morphine, and one-twelfth of a grain of ipececuanha. Dose : 1 to 6 lozenges.

OPIUM LOZENGES.

Extract of Opium, 72 grains.
Tincture of Tolu, ½ fluid ounce.
Refined Sugar, in powder, 16 ounces.
Gum Acacia, in powder, 2 ounces.
Extract of Liquorice, 6 ounces.
Distilled Water, a sufficiency.

Add the extract of opium, first softened by means of a little water, and the tincture of tolu to the extract of liquorice, heated in a water bath. When the mixture is reduced to a proper consistency, remove it to a slab ; add the sugar and gum, previously rubbed together, and mix thoroughly ; divide the mass into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains one-tenth of a grain of extract of opium, or one-fiftieth of a grain of morphine. Dose : 1 to 6 lozenges.

CHLORATE OF POTASSIUM LOZENGES.

Chlorate of Potassium, in powder, 3,600 grains.
Refined Sugar, in powder, 25 ounces.
Gum Acacia, in powder, 1 ozs.
Mucilage of Gum Acacia, 2 fluid ozs.
Distilled Water, 1 fluid ounce or a sufficiency.

Mix the powders and add the mucilage and water to form a proper

mass; divide into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains five grains of chlorate of potassium. Dose: 1 to 6 lozenges.

SANTONIN LOZENGES.

Santonin, 720 grains. Gum Acacia, in powder, 1 ounce.
Refined Sugar, in powder, 25 ounces. Mucilage of Gum Acacia, 2 fluid ozs.
Distilled Water, a sufficiency.

Mix the santonin, sugar, and gum; add the mucilage and water to form a proper mass; divide into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains one grain of santonin. Dose: 1 to 6 lozenges.

BI-CARBONATE OF SODIUM LOZENGES.

Bi-carbonate of Sodium, in powder, 3,600 grs. Gum Acacia, in powder, 1 ounce.
Refined Sugar, in powder, 25 ounces. Mucilage of Gum Acacia, 2 fluid ozs.
Distilled Water, 1 fluid ounce.

Mix the powders, and add the mucilage and water to form a proper mass; divide into 720 lozenges, and dry these in a hot-air chamber at a moderate temperature. Each lozenge contains five grains of bi-carbonate of sodium. Dose: 1 to 6 lozenges.

RECIPES—NOT OFFICIAL.

Carbolic Acid Lozenges.—1 grain carbolic acid in each lozenge. One for a dose, four or five times daily, as an antiseptic and stimulant.

Bromide of Ammonium Lozenges.—2 grains of bromide of ammonium in each. Dose: 1 to 3 lozenges. Useful in whooping cough.

Chloride of Ammonium Lozenges.—2 to 3 grains of chloride of ammonium in each. Dose: 2 to 4 lozenges. Much resorted to for bronchitis.

Guaiacum Resin Lozenges.—Made with black currant paste. Each lozenge contains 2 grains of guaiacum. A specific in arresting crescent inflammation of the tonsils.

MIXINGS FOR CHEAP LOZENGES.

The high price of gum, no doubt, accounts to a great extent for substitutes used in making a lozenge paste for cheap goods. The formulæ differ with different makers. The writer knows lozenge hands who at present are making a paste by simply melting glucose and working as much ground sugar into it as possible. Others use glucose and gelatine, and some use a mixture of gum, gelatine, and glucose. Readers who are called upon to make lozenges, where price is the only consideration, will find the following workable and answering this purpose. However, if this is still too expensive, the gum may be left out, then the gelatine, but I hardly think you can find anything cheaper than glucose, and this will do at a pinch by itself, but the quantity must be increased.

CHEAP COMMON MINTS.

28-lbs. Icing Sugar.	1-lb. Gum.
2-lbs. Glucose.	1 Quart Water.
1-lb. Gelatine.	Oil of Peppermint.

Process.—Soak the gelatine until it will take no more water; dissolve the gum in the water; warm the glucose and dissolve the gelatine in it, then mix the dissolved gum, glucose, and gelatine together; put the sugar in a heap on the slab; make a bay in the centre, and pour in the mixture; add the oil of peppermint, working up the whole into a stiff paste, adding more ground sugar if required, then roll the batch out in sheets; cut into lozenges; place them on trays; put them in the drying room till hard. Musk, rose, and any other sort may be knocked up in a similar manner.

CREAM LOZENGES.

The following is a capital mixing for cream lozenges of every description. This class of goods can be made on a small scale at a profit—no drying room is required, and the quality of the goods depends entirely on the manipulation. The operator must use great care and discretion

when handling the colours. Bright, but deep tints are required, at the same time heavy, solid colouring is to be avoided. Nearly all fruit flavourings require a little acid to throw them up, which must be ground to a fine powder and mixed with some dry sugar, then sifted together. This will make it permeate the batch better and easier. In making white, dissolve a touch of blue in the water (always work your white first on the slab). Keep the other colours on different parts, so that one does not smear the other. Good goods are often spoiled through carelessness in this respect. This paste can be made into a thousand and one different shapes, colours, blends, and varieties, such as blocks, rolls, bars, nuggets, cocoanut quarters, lozenges, pic-nics, cubes, plain and parti-coloured forms of every kind.

As stated under various headings through this work, no good purpose could be served by a wearisome repetition of mixings on the same lines. We give the principal articles made in each class and surely new departures will suggest themselves to the readers. These goods are always changing. Should the inventive faculty not be fully developed in any particular case, I should recommend the subject to study the windows of confectioners and buy a sample of anything he would like to make, as I find those who cannot conceive for themselves are wonderfully good imitators.

CREAM LOZENGE PASTE.

28-lbs. Ground Sugar.	½-lb. Gelatine.
3-lbs. Glucose.	½-Pint Water.

Process.—Soak the gelatine in water till quite soft; put one pound of the icing sugar with the half pint of water in a clean pan and bring it to the boil; remove the pan from the fire and stir in the glucose; replace the pan on the fire until just hot enough, that you could easily bear your hand in the syrup, then take it off and stir in the gelatine till quite dissolved and thoroughly mixed; put the bulk of the icing sugar in a heap on the slab, making a bay in the centre, into which pour the mixture, together with any colour or flavour required, then commence to work in the sugar from round the edge first, and so on, till the whole is worked up into a stiffish paste; it is then ready for the various purposes. Goods made from this paste will be ready for sale

in a few hours ; a hot room is not necessary, they will get hard enough in a dry workshop in a few hours.

RASPBERRY CREAM LOZENGES.

Process.—Make the paste as above directed ; work in sufficient carnation paste to give the batch a bright red tint (be sure the colour itself is good and brilliant) ; mix in 1½-oz. of tartaric acid and two ounces of best raspberry essence to each ½-cwt. ; roll out into sheets the thickness required and cut with oval cutter ; pack on trays and stand them in a dry place for a few hours, when they may be weighed and boxed. Use the dust very sparingly during the process ; cut firmly ; keep the cutter clean and dry, emptying it every few strokes.

VANILLA CREAM LOZENGES.

Process.—Prepare the paste as described, adding a little dissolved blue to bleach the colour white ; use two ounces of extract or essence of vanilla to every ½-cwt. batch, with one ounce of acid ; sift the acid amongst the dry sugar before putting in the mucilage ; roll out into sheets and cut with oval cutter.

CHOCOLATE CREAM LOZENGES.

Process.—Work into the cream paste, already described, three pounds of pure cocoa (melted) to every batch of ½-cwt., colour to shade with chocolate brown colouring ; add the colouring when the batch has been partly mixed, not too much at a time, as some of these colours are very powerful ; see that the cocoa is all melted before putting it with the sugar. In melting coaoa, do not add water, or it will be spoiled, simply put it in a saucepan and stand it on the stove plate ; it will soon run to a syrup.

MIXED CREAM LOZENGES.

Process.—From the same paste. See that your colours are the ver best and the flavours concentrated ; use powdered acid with raspberry, lemon, orange, and rose ; the other flavours usually made of almond, chocolate, and vanilla ; in the first two no acid, the latter optional. The names will suggest the colours to be used. For all practical purposes, four colours are enough, lemon, vanilla, raspberry, and chocolate. In mixing colours, always put the largest portion white, they show up the others. Use as little dust as possible during any operation with this paste, it takes the gloss off the colours.

COCOANUT CREAM LOZENGES.

28-lbs. Ground Sugar. 5-lbs. Cocoanut, grated fine.
Carnation Paste Colouring.

Process.—See that the cocoanuts are fresh and milky ; break them ; throw the milk away and pare off all the brown skin, then grate them fine ; put the sugar in a heap on the slab ; make a hole in the middle ; put in the nut and commence to work the whole into a paste of medium stiffness ; the size of the nuts will determine the exact quantity of sugar —you may want a little more or have too much ; knead in just sufficient to make a paste pliable, though stiff. The nuts should be fresh and used as soon as they are opened ; no liquid is necessary, except that which exudes from the grated kernel. Lozenges made according to these instructons will keep soft, moist, sweet, and of good flavour for a long time. Divide the batch into two portions, one portion double the size of the other ; colour the smaller portion with carnation paste, a deep tint ; leave the larger portion white, then roll out part of the white into a sheet the required thickness ; put it aside, then roll out part of the red into a sheet ; the red should only be half the thickness of the white sheet ; lay the red sheet evenly on the top of the white and press them together, then run the rolling pin over the two, until the exact thickness is obtained ; dust very sparingly and cut with oval cutter ; put them on trays in a dry place and they will be ready for sale in a few hours.

COCOANUT CREAM ROLLS.

Process.—The same mixing for paste as for cocoanut cream lozenges; colour a small portion a deep tint with carnation paste; work in a little more sugar into the red to absorb the moisture of the colour, so as to make the red the same consistency as the white; roll out both the red and white portions into sheets considerably thicker than for lozenges; place the white in this case on top of the red; press the two together, then roll them round carefully to thickness required.

IMITATION COCOANUT QUARTERS.

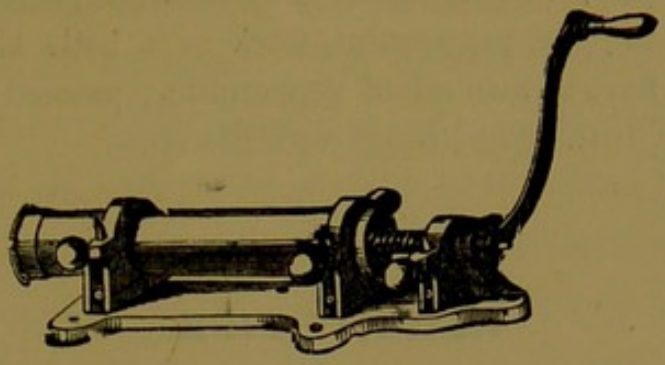
Process.—Use the same mixing as for cocoanut cream lozenges; colour a small portion with chocolate brown to imitate the skin of the cocoanut; roll out the white paste to the thickness of the white portion of the natural cocoanut kernal; roll out the brown paste very thin to imitate the skin of the cocoanut; lay the white paste on top of the brown; run the rolling pin over the sheet, then cut off small pieces, triangular shape, and press them in a cocoanut shell to take the shape. The cocoanut shells for moulding should be carefully sawn into quarters; the paste should be sufficiently stiff to keep the shape; let the paste stand in the moulds a little time to harden. In the wholesale, where the demand is great, iron moulds, of course, are preferable.

BLACK CURRANT LOZENGES.

14-lbs. Powdered Sugar.
6-lbs. Black Currant Paste.
1-oz. Tartaric Acid.
Gum Mucilage.
Jetoline Black.

Process.—Put the sugar on the slab; make a bay in the centre; pour in the gum; add the acid and black currant paste; mix the whole thoroughly into a stiff paste, adding more sugar if required; dust the slab with a mixture of half sugar and half starch powder; roll the sheets out one-eighth of an inch thick; cut with round cutters; pack on trays and stand the goods in a drying room till hard.

COLTSFOOT ROCK MACHINE.



COLTSFOOT ROCK.

16-lbs. Ground Sugar.
½-lb. Block Liquorice.
3-oz. Gum Dragon.
1 Quart Gum Mucilage.
¼-oz. Oil of Anniseed.
¼-oz. Essence of Lemon.
1-oz. Essence of Coltsfoot.

Process.—Soak the gum dragon in water for twenty-four hours and press it through a sieve ; put the sugar in a heap on the slab ; make a hole in the centre ; pour in the gum liquorice (which has been previously dissolved), aniseed and lemon ; make up the whole and knead to a very stiff paste, working in more sugar if required, then pass through machine on trays ; stand in the drying room till hard enough for packing.

BATH PIPE.

Process.—Prepare the same paste as for coltsfoot rock, leaving out the essence of lemon ; break off a small piece ; roll it out with the hands until nearly the thickness wanted, then use a long, flat board to finish rolling ; press very lightly on the board and the pipe will be equal in thickness the whole length, with a smooth surface ; spread goods on trays ; put them in the drying room till hard. The paste must be kneaded as stiff as possible, or the pipes will get flat while in the drying room, as they lie in one position till hard.

ROSE, LEMON, and PEPPERMINT PIPES.

These pipes are made from lozenge paste, worked up very stiff ; flavour

and colour as name indicates; colour the rose with carmine, flavour with otto of roses; lemon, colour with saffron paste, flavour with essence of lemon; for peppermint, work in a little blue to make a perfect white; flavour with oil of peppermint; proceed in exactly the same way as for bath pipes; finish with flat stick.

REGENT PIPE.

This pipe is striped with different colours. The body and stripes are made with lozenge paste, prepared in the same manner as bath pipe; cut off little pieces and colour red, blue or yellow; spread out the white body and lay the stripes on alternately, practically the same as directed for boiled sugars; squeeze them out in lengths with the hands; roll them round, twisting the stripes spiral shape, and finish with flat stick.

ON ICE CREAM MAKING.

Ices of various descriptions are now almost considered a branch of our modern retail confectioners, in fact, during the summer months, many of our best shops look to this for the greater part of the takings. Since the introduction of the frozen custard into this country, it has been the favourite refresher with a great portion of the public, but especially the young. At one time the trade was almost exclusively in the hands of foreigners, but at the present moment they only go to swell the great army of purveyors in this branch. The vast amount of money spent weekly on ice cream, not only in hot weather, but all the year round, would seem incredible were it tabulated.

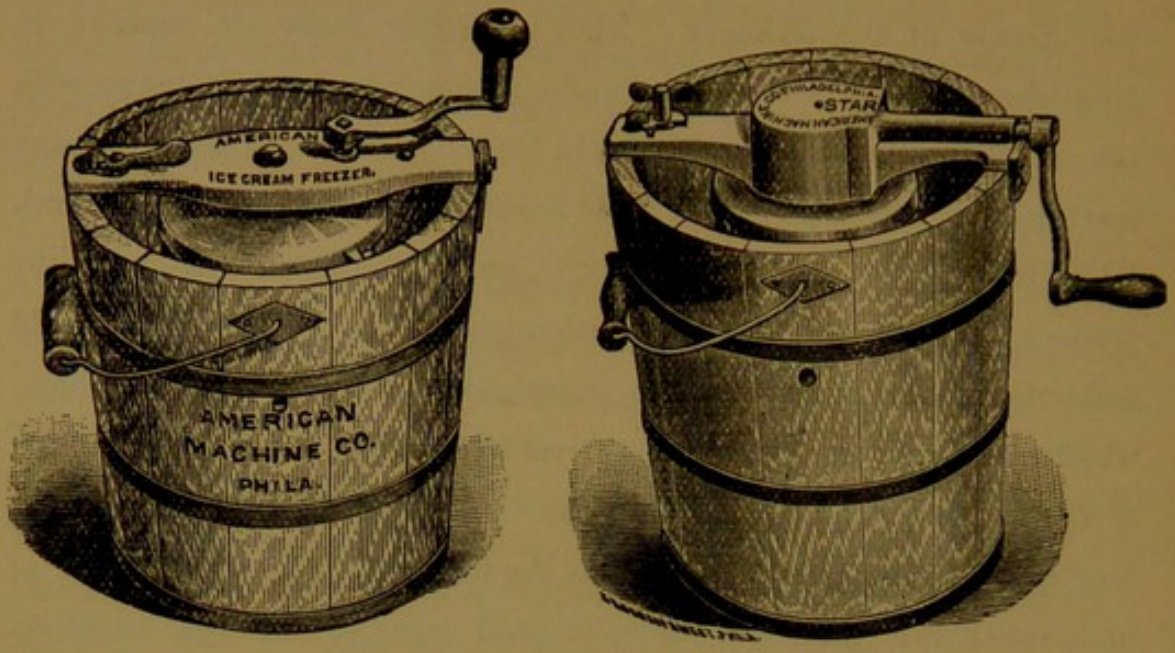
Many gigantic places in London and other large towns have been reared on the profits made in making and vending this commodity, while moderate fortunes are made every season, even now, by wide-a-wake jacks who send out numbers of barrows attended to by their own countrymen. Competition is now perhaps greater than at any former period, and although fancy prices cannot be got for common stuff, yet there is a good profit to be obtained on good and well made cream. It is most important for a good trade to have the quality A1. Youngsters will walk a long way to get what they want to their liking, and are

generally good judges of what is best and *who* sells it. That is a fact, most people with my experience will admit, and to this fact I attribute the success of the stranger. They generally make ice superior to Englishmen, because they have more patience to work it better with the spatula and are more particular in the preparation. There are many machines in the market for the rapid freezing and beating of the custard, which shopkeepers use to save labour, and, to a large extent, spoil the product. I have yet to see the mechanical contrivance equal to the old fashioned method in producing a smooth, soft, still, firm, mellow cream, which are served up in our foreign restaurants and cafés. Few, if any of them, use any machine. One can see the pewter freezer with the long handled spatula sticking out at the top, standing at one end of, or underneath the counter, while in a good many of our own establishments we find the cheap American machine, which grind and freeze the contents by its rapid motion to a hard, frosty, congealed mass.

Still, confectioners want to know why Italian and Swiss jacks get most of the trade. With ice cream, as with everything else, the writer is of opinion the best sells best and pays best. During the summer months the sweet trade is quiet. If we want to add an adjunct to our business, let us do it well and cater with a good article, at least as good as our neighbours. It is the duty of your humble servant to give a selection of all the mixings and processes, the better processes and qualities of course I recommend, but where circumstances and conditions make it imperative to be both economical and quick, the reader will have the opportunity of finding the mixing and process in its place.

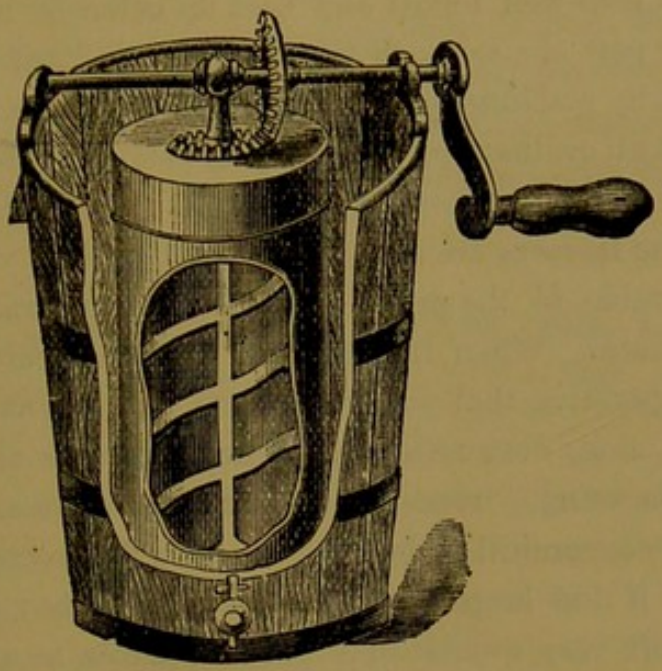
ICE CREAM MACHINERY.

AMERICAN ICE CREAM FREEZERS.

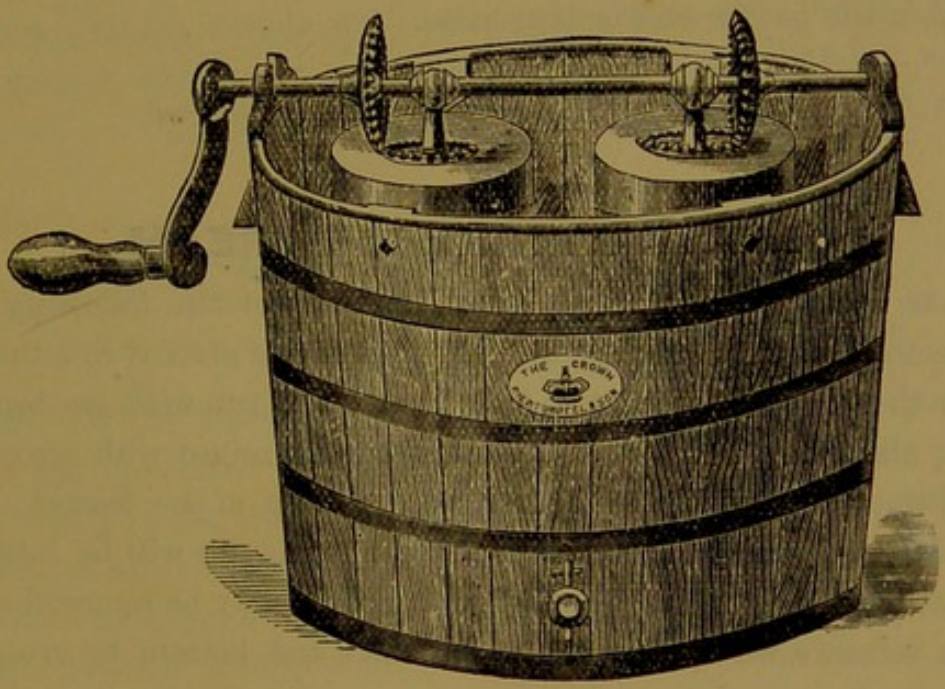


We have in the market at present a large selection of freezing machines at moderate prices. The contrivances are both ingenious and capable of producing a frozen mixture in a short time of good quality. America is at the front as far as prices are concerned, and, although perfect in construction and calculated to do all that is said for them, the specimens I have seen from that country are of rather a gingerbread type. The freezing pots are made of strong sheet tin, some of them of copper tinned inside. The iron work is galvanized and the tubs are made of white cedar wood. My objections to these machines are that the pots are too thin, thereby freezing the mixtures too quickly, notwithstanding the rapid motion of the beater which works inside the freezer, the cream when frozen is roughish. It would not be possible to make a first-class ice cream in these machines, but they are cheap, effective, and quick, and may do for a common trade.

CROWN FREEZING MACHINES.



SINGLE.



DOUBLE.

These English machines are much stronger and are altogether better adapted for the purpose. The freezers are made of best pewter. The mechanical parts are simple, strong, and effective, while the tubs are well made of oak—although they are much dearer than the foreign make. If we consider durability, they would come out in the end much

cheaper, besides pewter is much preferable as a metal for freezing. In it the custard gets well mixed and beat up before it begins to congeal, as the pewter pots are so much thicker than the Yankee tin ones. Still the ices made by machine, at least any I have yet seen, are not equal to those made in an ordinary pewter freezing pot. In this case the process is slower, but the result can be made to far excel that by the quicker method. Zinc freezers are also largely used and are very cheap. They are not so durable, at the same time, they do very well for common or custard ice cream. When making ices from the fruit or when acid is used, it is imperative that pewter freezers be used, as the acids would act upon the zinc, destroying the delicate flavour and colour of the cream. When using a freezer a tub and spatula are also necessary.

It is more economical to buy the tub with the freezer—then it is the proper size; if too large, there is a waste of ice; if too small, the cream gets soft very quickly. A pewter spatula is also necessary—a flat stick sharpened at the point is not strong enough to scrape the frozen mixture from the sides and bottom of the freezer, and a knife scratches the pewter and is dangerous.

HOW TO MAKE ICE CREAM.

Prepare a custard or water mixture from any of the following recipes as directed; pour the mixing into the freezer and place it in a tub; now fill up the space between the freezer and the tub with ice broken in pieces, about one inch and a half in diameter, mixed with coarse salt; fill up the tub to within 2½ inches from the top of the freezer; put on the cover and proceed to turn the freezer round; it will be rather stiff at first, but will soon get freer, when the cover may be removed and the frozen mixture which adheres to the sides and bottom be scraped off with spatula.

The action of the freezer will now be so easy that it may be turned very fast with little exertion; keep the sides and bottom free from frozen mixture, well mixing the hard scrapings in the body of the custard as it begins to stiffen; use the spatula to beat it up smooth; keep turning and beating until the spatula will stand upright in the cream when the process is finished. If the cream is to be served out in

glasses during the day, drain off part of the water from the tub which the action of the salt upon the ice causes, by means of a tap fixed in the bottom ; also scrape the sides down from time to time, this will keep it from getting hard and lumpy. N.B.—When freezing by machine, simply put the custard or other mixing in the freezing pot ; place it in position ; fill tub with ice and coarse freezing salt, and turn the handle till frozen.

CUSTARD ICE CREAM, No. 1.

2 Quarts New Milk. 6 Fresh Eggs.
1-lb. White Sugar. 2-oz. Fresh Butter.
¼ to ½ oz. Vanilla Essence.

Process.—Well whisk the eggs with a fork or whisk, then stir them into the new milk, adding the butter and sugar ; put the whole into a clean pan and place on a slow clear fire ; keep stirring all the time, well rubbing the bottom of the pan until the mixture comes to the boiling point, when it will get thickish ; be careful that it does not quite boil or it will curdle ; remove the pan from the fire and strain through a fine hair sieve ; stand it aside until cold ; when quite cold, put the custard in the freezer, adding the vanilla, and freeze either by hand or machine as directed ; a tinge of saffron would make the cream look richer.

No. 2, CUSTARD ICE CREAM.

1 Quart New Milk. ½-lb. White Sugar.
2 Fresh Eggs. ½-oz. Fine Gelatine.
1-eighth-oz. Vanilla Flavour.

Process.—Whisk the eggs and mix them well with the new milk and sugar ; put the whole in a clean pan on a slow fire, and stir until it comes nearly to the boil, then remove the pan from the fire and stir in the gelatine until it dissolves ; stand aside until quite cold ; add vanilla just before freezing.

This cream is usually preferred, being smoother and having a better body, though only in appearance.

No. 3, CUSTARD ICE CREAM.

1 Quart New Milk. ½-lb. Sugar.
1 Pint Water. ½-oz. Gelatine.

Process.—Mix the milk, water, and sugar together in a clean pan ; put

the whole on a slow fire; stir occasionally until nearly the boiling point, then remove the pan from the fire and stir in the gelatine till dissolved; strain and freeze as directed when cold.

This is a fairly good cream, though not rich; in freezing, be careful it does not get lumpy; do not freeze too rapidly and keep the sides of the freezer well scraped, stirring the hard edges well into the body; the poorer the custard the more likely it is to get icey.

CHEAP ICE CREAM.

3 Quarts New Milk. 2-lbs. White Sugar.
¼-lb. Farina or Corn Starch.

Process.—Dissolve the farina in part of the milk, then mix the whole together and simmer on a slow fire (not boil) until it thickens; remove the pan from the fire, stand aside till cold, then freeze. N.B.—In practice, the custard is usually made at night and frozen first thing in the morning. However, that depends upon circumstances and run of business. It is almost superfluous to add that these formulæ may be altered a little; the addition of eggs and other good things will always improve the quality, and, when eggs are cheap, one or two in the common creams would be much appreciated no doubt.

RASPBERRY ICE CREAM.

2 Quarts New Milk. 2-oz. Fresh Butter.
1-lb. White Sugar. Raspberry Flavour.
6 Fresh Eggs. Carmine Colour.

Process.—Whisk the eggs and stir them into the milk, adding the sugar and butter, then heat the whole in a clean pan almost to the boiling point, keeping the contents well stirred; remove the pan from the fire; strain through a hair sieve; when cold, add the flavour and colour a rose pink, not too heavy. Freeze as already directed.

RASPBERRY ICE CREAM, No. 2.

1 Quart New Mllk. 2-oz. Thin Gelatine.
½-lb. White Sugar. Raspberry Flavour.
Carmine Colour.

Process.—Mix the milk with the sugar and bring it to the boiling

point; remove the pan from the fire; add the gelatine and stir till dissolved; stand aside till cold, then colour and flavour and freeze in the usual way.

LEMON CREAM ICE.

2 Quarts New Milk.
1-lb. White Sugar.
3 Fresh Eggs.
1-oz. Thin Gelatine.
Juice of 2 Lemons.
Saffron Colour.

Process.—Whisk the eggs and stir them into the new milk, together with the sugar, in a clean pan; bring the whole to the boiling point; strain and stand aside till cold, then add the lemon juice; colour a soft yellow and freeze as directed.

AMERICAN ICE CREAM.

3 Quarts Best Cream. ¾-lb. White Sugar.
¼ to ½-oz. Extract of Vanilla.

Process.—The above is a real Yankee recipe. Dissolve the sugar in the cream; add the vanilla; as soon as the sugar is dissolved, freeze as directed; it is unnecessary to apply heat at all to the custard. This mixture increases in bulk to almost double the quantity during the process of freezing.

DESSERT ICES.

This is the better class or after-dinner ices. The variety is so numerous that to chronicle the names would fill a small volume. Let it suffice to enumerate the more popular kinds, which will almost be sufficient for any purpose the reader may require, because, with a little variation in the ingredients and flavours, the variety may be worked out to any extent. Wines, fruits, pulp, extracts, and essences are used in this class, which may be altered, increased, or reduced to suit any particular palate. The excellence of any dish is judged by the taste and palate to whom it is served. Let it be noted that fruit, pulp, and other preserved goods that are heavier than the cream should be mixed in when the

custard is partly frozen or, naturally, they would fall to the bottom, the set cream will hold them in position and the process of mixing, whether with beater or spatula, will distribute them throughout the body. Wines and spirits must be added when the custard is cold; when adding acid or lemon juice, be careful not to curdle.

DESSERT ICE CREAM.

GENERAL RECIPE.

1 Quart Fresh Cream. 4 or 5 Fresh Eggs, according to size.
8-oz. Powdered Sugar.

Process.—Whisk the eggs, then stir them amongst the cream, adding the sugar; put the whole in a clean copper pan; place it on a slow, but clear fire; stir it until it nearly boils, when it will get thick, then strain through a fine hair sieve; stand aside until cold; add the flavouring ingredients and freeze according to instructions already given. N.B.—This cream will be understood to form the body for the following flavours.

RASPBERRY ICE CREAM.

Rub fresh raspberries through a fine sieve; add a pint of this pulp to every quart of the above custard; pour it into the freezer; when the custard has been partly frozen, colour with a little cochineal and finish the process.

STRAWBERRY ICE CREAM.

This fruit is prepared exactly the same as raspberries—scarlet strawberries are the best for the purpose—a small pinch of citric acid or the juice of a lemon will improve either of them; add, when partly frozen, colour lighter than for raspberry.

PINE APPLE ICE CREAM.

An ordinary sized pine apple to every two quarts of cream should be

prepared by peeling and bruising through a fine sieve ; add the custard when partly frozen, with the juice of a lemon ; colour with saffron water, and finish freezing.

COCOANUT ICE CREAM.

Peel and grate a small fresh cocoanut for every quart of custard to be frozen ; when the custard is taken from the fire, stir in the cocoanut, then strain ; freeze when cold.

PARISIAN COFFEE ICE CREAM.

Make a strong infusion of Mocha coffee and add half-a-pint, in which is dissolved 3-oz. sugar to every quart of custard to be frozen. N.B.—When infusions of any kind are added to the custard, it is necessary to sweeten them with a little extra sugar, so as not to reduce the standard sweetness of the custard.

TEA ICE CREAM.

Add to every quart of cream half-a-pint of a strong infusion of good black tea.

CHOCOLATE ICE CREAM.

Melt near the fire 4-oz. of pure cocoa paste with a little butter ; add this quantity to every quart of custard when partly frozen.

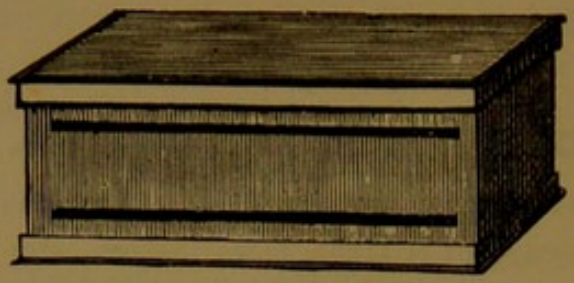
NOYEAU ICE CREAM.

To every quart of custard add one glass of noyeau and one glass of sherry just before freezing.

ALMOND ICE CREAM.

Blanche and grate 4-oz. Jordan and 1-oz. of bitter almonds ; add this to each quart of custard, prepared as directed, and freeze.

NEAPOLITAN ICE BOX.



Mix with one pint of water the yolks of fourteen eggs and two glasses of maraschino wine; add sugar to taste; place the whole in a clean pan; put it on a slow fire and stir all the time until near the boil; remove the pan from the fire and well whisk the mixture until it foames, then pour it into a Neapolitan ice box; place the box in a tub surrounded with small pieces of ice, well mixed with freezing salt, for four or five hours, or till required; when wanted, take out the box and dip it in tepid water for a second; remove the cover and the block will drop out. Part of this ice may be scooped out and the space filled up with cream custard ice, if preferred.

NEAPOLITAN ICE PARTI-COLOURED.

Prepare custard or water ices two or three different colours and flavours; freeze them, but not too hard, then take the Neapolitan box and spread a layer of red (raspberry), then a layer of white (vanilla), and on top a layer of yellow (lemon), filling up the box; place the box in the ice tub, surrounded with broken ice and salt for a couple of hours; it will then be hard, when it may be removed from the box; cut into slices and serve.

LEMON WATER ICES.

2 Fresh Eggs, whites only. ¼-oz. Tartaric Acid.
¾-lb. Powdered Sugar. 1 Quart Water.
Essence of Lemon.

Process.—Whisk the whole together and freeze as already directed.
N.B.—When making the mixture for water ices, the palate will be a good guide; make the preparation stronger than if required for drinking, as freezing considerably reduces the flavour.

LEMON WATER ICE (Best).

This is made precisely the same as last, but instead of using essence of lemon, squeeze the juice of eight and the peel of three, pared very thin, to every quart of water, the whites of three eggs, and powdered sugar to taste; strain and freeze.

RASPBERRY WATER ICE.

Process.—Squeeze the raspberries through a fine sieve; use half a pound of this pulp to every quart of water, with a pinch of citric acid; the whites of two eggs and sugar to palate.

STRAWBERRY WATER ICE.

Process.—Prepare in exactly the same way; the strawberries should be in good condition. Note.—Any kind of fruit pulp may be used for flavouring ices, the process is the same. Apples, pears, and other hard fruits require boiling before being strained.

CHERRY WATER ICE.

Process.—Bruise in a mortar one pound of Kentish cherries with the stones; add the juice of two lemons, half a pint of water, one pint of clarified sugar, one glass of noyeau, and a little colour; strain and freeze.

ICES FROM JAMS.

When fresh fruit is not to be had, jams may be used; although not so good as fresh fruit, they are to be preferred to artificial flavours. Dissolve the jams in boiling water, strain through a sieve, and use in the same proportion as fruit pulp.

NESSELRODE OR ICE PUDDING.

Prepare a custard of one pint of cream, half a pint of milk, and the

yolks of six eggs, and half a pound of sugar; flavour with a stick of vanilla and one ounce of sweet almonds powdered; stew over a slow clear fire and stir until it gets thick, being careful not to let it boil; stand aside till cold, then add a wine glassfull of brandy; partially freeze, then add two ounces of raisins and four ounces of preserved fruits, cut small; mix well and mould. (Basket shape generally used).

ICE MOULDS.

The above shows a small group of moulds used for ices. They are made in a great variety of designs and sizes, usually of bright pewter, some copper, the former is preferable, being easily cleaned and does not corrode. A well-made mould is necessary to give a finish to a well prepared cream.

Ices served from some moulds are, for general style and natural appearance, simply perfection.

TO MOULD ICES.

The recipes for any of the mixings, either cream, custard or water, will answer for the moulds. The process of moulding is very simple and easily explained. Prepare a mixing from any of the formulæ and pour it into the mould, put on the cover, wrap the mould in paper, put it in a tub and surround it with broken ice and freezing salt for at least two hours, or let it remain embedded until required, then take it out of the ice, clean off the paper, &c., dip it into luke warm water and lift it out again directly, take off the cover and turn it on a dish in the usual way. These ices are decorated in various ways when sent to table, according to the nature of the mould—for instance, a few leaves are used when it represents fruit.

FRUIT PRESERVING, &c.

No work which professes to treat on the confectionery business could be considered complete without more than a passing reference to fruit preserving. This business can hardly now be considered apart from sweet making. Most of the leading firms who make and supply the wholesale trade with hard and soft confections are, more or less, interested in jams, jellies, peel, &c,, while many of the retail people look to this branch for their summer trade. This is as it should be. Those who know anything of the trade know that during the summer months the ordinary sweets are almost a dead letter. Fruit in all its tempting freshness is in season and the contest between our every-day luxury and the annual visitors are unequal, consequently we must either take a back seat and wait our turn, or turn on the opponents and turn them to account. The jam trade has perhaps been a little over done of late—prices are low and competition keen. There may be many reasons for this state of things, but the principal one, in the writer's opinion, is that a number of people, possessing more or less capital, were so influenced by some remarks made by a prominent politician some years ago as to the profits to be derived by growing fruit and making jam, and they rushed into the speculation without further investigation, hence the erection of large and small jam factories all over the country, both private and joint stock. What was and is the result! The shareholders and creditors, in most cases, could better answer this question, but most of us connected with the trade could reckon a good many who have come to grief. As a rule, jams and preserves are not sufficient in themselves to build up a successful trade. In the busy season a lot of space and labour is required. When the rush is over it is practically found almost impossible to reduce the staff and expenses in the same ratio as the trade has fallen off, consequently, what is gained in season is more than eaten up with expenses during the quiet time. All these circumstances go to make the same business fitted in every way to fill up the sweet-makers slack times and find employment, both for his hands and machinery, thereby making a prosperous and profitable consolidated concern.

This is the experience of the writer, who has been closely connected with the trade more than twenty-four years, and has filled the post of principal jam boiler in more than one large factory, and has the satis-

faction of stating that he has received many tangible proofs of his employers' esteem during that time.

ON JAMS, JELLIES, and MARMALADE.

Perhaps the the result of my long experience will be useful. The following hints and wrinkles must not be taken as if written in a dogmatic strain. The experience of one man may help another. None of us know everything. It is only a *bigot* who refuses to learn. I give them to the practical man for what they are worth ; to the beginner as the best advice and methods practical manipulation has taught me.

Jam, jelly, or marmalade, if properly boiled, with its proportion of good sugar, will keep good for years in either, glass, china, or earthenware vessels, without the aid of vinegar, whisky, or spirit of any kind. The old style of covering the preserves with paper soaked in spirits is a needless expense. If the surface is slightly oiled with a drop of the best olive oil it will prevent any incrustation forming on top. It is not essential to make the covering air-tight, so long as it will keep the dust from the contents that is the chief object. It is a fallacy to suppose that jam made from wet fruit will not keep, but dry fruit is preferable, especially with raspberries and strawberries, as they keep the colour better in boiling. Most preserve makers use an antiseptic of some kind, such as Bush's preservation, Salicylic acid, &c., perhaps to avoid running the risk of the jams becoming mouldy, the result of a faulty boil or two. It may be wise always to employ a small proportion of some reliable preservative. As regards the quality of sugar used for preserving, it should be good, strong, grainy, and white. Dutch crushed, crystal, or granulated—cheap, soft pieces, or raw sugars will not do, they lose weight in boiling, deaden the colour, and reduce the quality to a syrupy, sticky mass.

Dry fresh fruit, good white sugar, a good fire, or plenty of steam is a condition of getting a clear, sparkling, free, full flavoured preserve of a nice jellied consistency. If we cannot always get dry, fresh fruit, we should always be able to get good sugar, a clear fire or plenty of steam. These are two out of the three conditions for the very best jam. If we cannot get perfection let us get as near it as we can. The proportion of sugar to fruit given in the formulæ, are not, and cannot be stereotyped.

If the fruit is green use a little more sugar ; if soft and wet, a little less. Too ripe or wet fruit should always have green gooseberry or apple juice added to give it body and congealing properties. When filling whole fruit or currant jam, let it stand a little to congeal, then stir before pouring out, or the fruit will float on top. See that the edges of the pot are wiped with a damp cloth before tying down, or the smears will show through. Use vegetable parchment paper to cover with instead of gut skin or bladder. If the latter get damp from any cause, such as the jam touching, it gives off an offensive smell, besides the parchment looks cleaner. Glass vases, butter coolers, cream jugs, sugar basins are very expensive to fill, the breakages are more than are dreamt of by the proprietors in most places. A pretty label on a clean jar, with a neat white parchment covering is the best finish to well made jam.

GLUCOSE IN JAMS.

Many manufacturers use glucose in large quantities in making jams. Some think it cheapens the bulk and causes it to congeal. Opinions differ. I should not myself use it had I a jam factory of my own—it causes the preserve to be heavy, syrupy, and stringy.

However, as it is a recognised ingredient, it will be found amongst the recipes for second qualities.

APPLE and GOOSEBERRY JUICE in JAMS.

This is tender ground on the question of adulteration. That which improves can hardly be called an adulterant in the true sense. Experience teaches that in many fruits and conditions of fruit the addition of a little juice adds to the flavour, brilliancy, and consistency of the jam, especially is this the case with raspberries, strawberries, and other fine fruits, unless freshly gathered.

After a few days, raspberries and black currants have a tendency to acidity. In this case, a little juice is very useful, and, even where the fruit is quite fresh, the addition will improve the result, however, it must not be over done. In the formulæ given, we recommend apple juice in place of water when the fruit is in ordinary condition. In the event of having fruit out of condition from any cause, I would recom-

mend a much larger proportion of apple or gooseberry juice, allowing one pound of sugar to every extra quart of juice, having seen many difficulties got over in this way. If the apples or gooseberries are good, the congealing properties are very great, consequently a rich, free jam is the result. On the other hand, if they had been boiled without, it would have been dry and thick. The juice is easily made. Simply cut up into slices a quantity of cooking apples, put them in a clean pan, cover them with water, and boil till they are soft and pulpy; as they become thick, add more water; when done, strain through coarse jelly bags, if wanted for jelly, or through a fine sieve if for mixing with jams. Gooseberry juice is prepared in the same way. Juice for steam pans is prepared by another method in a steam tub, details of which will be found in its proper place. In order to be better understood, we have separated the preserves boiled over the furnace from those prepared by steam power.

JAMS, JELLIES, &C.

FIRE HEAT.

RASPBERRY JAM, No. 1.

14-lbs. Fresh Raspberries. 12-lbs. White Sugar.
1 Quart Water or Gooseberry Juice.

Process.—Put the above proportions in a clean pan (copper or brass); place it on a clear open fire or confectioners' furnace; stir constantly until the sugar melts, then occasionally till it begins to thicken; when it must be closely watched and kept on the move by stirring well, rubbing the bottom of the pan with spaddle. If the boiler is a beginner, directly the boil feels a little thick ease the pan off the furnace by standing a piece of iron under one side between the furnace and the pan. Now commence to try it by lifting out the spaddle, hold it over the pan—at first the jam will run off thin, then a little thicker, then drop off in webs; it is now done and should be lifted off at once and contents potted. Considerable practice is required to test jams by this method, but when acquired much time is saved and the consistency determined more accurately. When looking at the jam falling from

the spaddle, hold it opposite a window if possible. The old method of taking a little out on a cold plate to see if it congeals may be practiced in addition to the other test at first, although with quick fires, while the sample is cooling the bulk may be burning. Jam should be potted as soon as boiled; give the bulk a stir round with the ladle every time you fill the jug. If the jam is allowed to stand in bulk after boiling, for even half an hour, the delicate flavour is destroyed, so that it is advisable to fill out into pots or jars as soon as possible.

RASPBERRY JAM, No. 2.

14-lbs. Raspberries. 14-lbs. White Sugar.
2 Quarts Gooseberry Juice.

PROCESS.—As for No. 1. A little colour may be required to brighten the bulk. An excellent jam.

RASPBERRY JAM, No. 3.

14-lbs. Raspberries. 10-lbs. White Sugar.
2 Quarts Gooseberry Juice. 5-lbs. Glucose.

PROCESS.—Boil the raspberries and gooseberry juice a few minutes, then stir in the sugar and glucose, and finish boiling sharply, as directed in No. 1. Colour if required.

RASPBERRY JELLY.

Fresh Raspberries. White Sugar.

PROCESS.—Press the raspberries through a cane sieve, then squeeze the pulp through jelly bags; boil the juice in the proportion of 9-lbs. of white sugar to each gallon; try the boil as directed in No. 1. When the jelly is potted, skim the top almost directly with a wooden spoon. The pulp left in the jelly bag may be used for cheap jams.

STRAWBERRY JAM, No. 1.

14-lbs. Strawberries. 2 Quarts Gooseberry Juice.
12-lbs. White Sugar.

PROCESS.—The same as for raspberry jam, No. 1. It is almost necessary,

in order to get a good jam, that gooseberry juice is added instead of water. Strawberries do not congeal readily, besides adding to the flavour, a tinge of red colouring is generally necessary.

STRAWBERRY JAM, No. 2.

14-lbs. Strawberries. 7-lbs. Gooseberry Pulp.
18-lbs. White Sugar.

Process.—Use the gooseberry pulp after it has been put through the cane sieve; proceed as for No. 1, raspberry. A little colour is necessary. This is a good jam. N.B.—Cheaper qualities may be made by adding more pulp. Glucose is too heavy for this jam—it makes it tough.

WHOLE FRUIT STRAWBERRY JAM, No. 1.

14-lbs. Freshly Picked Strawberries. 12-lbs. White Sugar.
3 Pints Water.

Process.—Pick the strawberries free from stems; put the sugar and water in the pan and bring it to the boil; allow it to boil for seven or eight minutes, or, say 240 by thermometer, then add the strawberries (put them in carefully not to break them), then boil sharply for twelve minutes, or until the syrup thickens; the spaddle does not show the web with this fruit; keep stirring all the time after the fruit is added; if it is likely to flow over, add a few drops of best salad oil, or a piece of fresh butter, the size of a Barcelona nut; when the jam is ready, pour the bulk in another vessel and stir till it cools a little, so as to mix the fruit with the syrup, and every time the jug is filled give it another stir.

WHOLE FRUIT STRAWBERRY JAM, No 2.

14-lbs. Freshly Picked Strawberries. ½ Gallon Gooseberry Juice.
16-lbs. White Sugar.

Process.—Dissolve the sugar in the juice and boil it for a few minutes before adding the strawberries; continue to boil, keeping it stirred all the time until ready, which may be told by the spaddle test; the time on a sharp fire would be about twelve to fifteen minutes, after the strawberries have been added. This, in the opinion of most people, is a much

superior jam to even the pure article, No. 1, the consistency is better and the flavour more pungent. Use the oil or fresh butter mentioned in last formula.

BLACK CURRANT JAM, (Whole Fruit).

14-lbs. Black Currants. 12-lbs. White Sugar.
3 Pints Water.

Process.—Pick the currants free from stems ; put them, together with sugar and water, in a clean pan and boil in the ordinary way, keeping the mixture well stirred all the time till ready, which may be tried in the usual way with spaddle. This method is much preferred to rubbing the fruit through sieves. Take it as an axiom that the less fruit is handled, bruised, or boiled the better the preserve in every respect. It is a mistake to suppose that any kind of sugar will do for black currants. To make good jam good sugar must be used.

BLACK CURRANT JAM (Whole Fruit), No. 2.

14-lbs. Black Currants. ½ Gallon Gooseberry Juice.
16-lbs. White Sugar.

Process.—Same as above. Most people prefer it with the addition gooseberry juice—it makes a rich jelly and mellows the flavour.

BLACK CURRANT JAM, No. 3.

14-lbs. Black Currants. 16-lbs. White Sugar.
½ Gallon Gooseberry Pulp. 3 Quarts Water.

Process.—Put the currants and water into the boiling pan and boil in the ordinary way, stirring all the time until they get soft, which will be about fifteen minutes after they commence boiling, then remove the pan from the fire and pass the hot pulp through a small sieve (ten holes to the inch), then return the pulp, add the sugar and the gooseberry pulp, and boil off in the usual way. This makes a really good jam and saves the time in picking over the currants. A little glucose may be used with this fruit, in the proportion of 14-lbs. equal to 10-lbs. sugar, for sweetening and preserving properties, but really it should only be used where quality must be sacrificed for price.

BLACK CURRANT JELLY.

14-lbs. Black Currants. 1 Gallon Water.
7-lbs. Gooseberries. White Sugar.

Process.—Put the currants, gooseberries, and water in the pan and boil till quite soft and pulpy, then strain through jelly bag, measuring the juice in the pan, and allow 7-lbs. sugar to every gallon and boil off on a good fire. The jelly is easily tried with a spaddle. Directly it flakes, off with the pan and pour it into selected vessels quickly, as this congeals very fast. Almost as soon as it is filled out, the skum should be skimmed off the top. N.B.—Should a pure black currant jelly be wanted, keep out the gooseberries—the process is the same. The above formula is considered better than when made from black currants alone.

RED CURRANT JAM (Whole Fruit), No. 1.

14-lbs. Red Currants. 11-lbs. White Sugar.
3 Pints Water.

Process.—Pick the currants free from stems and proceed exactly as for black currant jam. Gooseberry juice instead of water will much improve the result.

RED CURRANT JAM, No. 2.

14-lbs. Red Currants. 11-lbs. White Sugar.
6 Pints Water.

Process—Boil the currants and water together until soft, then press through a small sieve to keep back the stems ; put the hot pulp back in the pan ; add the sugar and boil off.

PLUM JAM.

14-lbs. Plums. 11-lbs. Sugar.
3 Pints Water.

Process.—Put the ingredients in the pan and boil in the usual way till it drops in flakes.

DAMSON JAM.

14-lbs. Damsons. 13-lbs. White Sugar.
3 Pints Water.

Process.—As usual. Glucose may be used in the last two recipes, say 10-lbs. sugar and 4-lbs. glucose, instead of 13-lbs. sugar.

GOOSEBERRY JAM.

14-lbs. Gooseberries, red or green. 12-lbs. Sugar.
3 Pints Water.

Process.—As usual.

APPLE JELLY.

Cut up any quantity of cooking apples into slices ; put them in a pan and cover them with water and boil till quite soft ; if they get too thick, add more water ; they must be stirred nearly all the time while boiling ; when ready, strain through jelly bags. Measure out the juice back into the pan and add from 4-oz. to 6-oz. of sugar to each pint, according to thickness, also quality of apples, then boil off as already directed.

ORANGE MARMALADE.

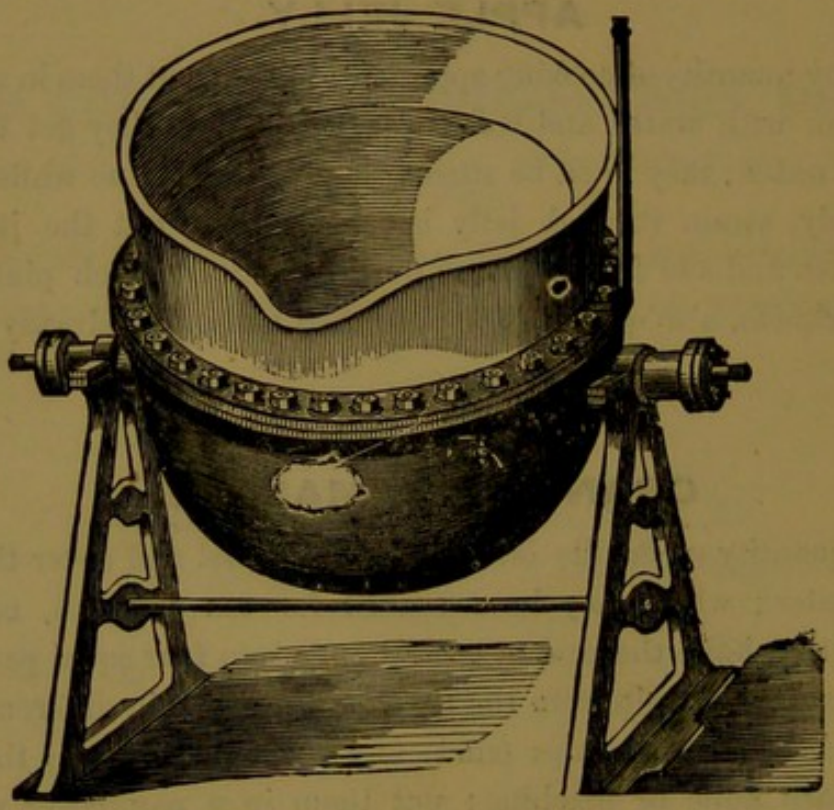
Put any quantity of Seville oranges into a vessel and cover them with boiling water ; when they have soaked for ten minutes, commence cutting with a knife the rind of each orange into four equal parts ; open it and separate the pulp from the rind, putting each in different places ; when finished, take the chips (rind) and cut it up into very thin strips with a sharp knife or machine ; put them in a pan, cover with cold water, and boil them till quite tender ; if the water is changed once or twice during this process, the result will be better ; when ready, strain through a cane sieve ; leave them draining while the pulp undergoes a similar process. Cover the pulp with water and boil till soft, then rub them through a cane sieve, just fine enough to keep back the pips ; now mix the pulp and chips together ; weigh them, and for every pound add one pound of best white sugar ; put the whole in the pan and boil off on a brisk fire ; stir all the time and try it with spaddle same way as

directed for jam. If clear marmalade is wanted, keep out the greater part of the chips. To make marmalade on a big scale, see instructions under steam power.

JAMS, VARIOUS.

Blackberry, cranberry, raspberry, and currant, mixed, &c., are made in exactly the same way as similar fruits for which we have given instructions. We think it would be waste of time to even enumerate them.

STEAM PAN.



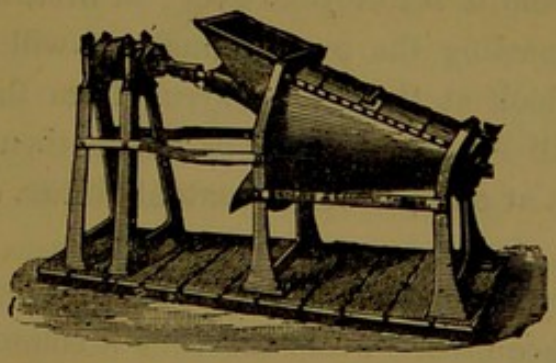
PRESERVES BY STEAM POWER.

Steam is now almost universally used as a means of boiling, especially for the wholesale trade. Compared with furnace work, the saving in labour is no less remarkable than the facility with which it can be made. Jam cooked on a fire or furnace requires constant attention and continual stirring, so that one man has all his work cut out to look after one

pan, and may turn out from five to eight cwt. per day of ten hours, according to the size of pan and class of fruit, while, with less fatiguing labour, he could, with the help of a lad, attend to six steam pans, each making 1½-cwt per boil. That would be, on the average, 9-cwt. every forty minutes, besides, the operation would be conducted in less smoky and altogether cleaner surroundings.

The construction of the necessary mechanical contrivances is neither very costly nor do they require a lot of space. Any machine maker would be able to advise as to the best position for the pans, &c., after seeing the proposed factory or department, but it is well to know that a good supply of steam is absolutely necessary, in order to make good preserves, so that in buying a boiler be careful to have it large enough. Allow 4-horse power for every pan to be erected. It is also necessary to have what is known as a "steam tub." This is generally a glucose barrel, fitted with a perforated copper coil. This coil goes down the centre of the cask and takes two or three circles round the bottom. The tube is used for pulping apples, boiling orange chips, &c. The steam passing through the small holes soon reduces the raw fruit to a pulp and is of great service in keeping a supply of juice for jelly or pulp for jam. The pressure of steam for boiling purposes should not be less than 35-lbs., while from 40 to 50 would not be too high. The quicker the boiling the better the colour and less loss by evaporation. Tables, benches, &c., must be erected according to the size, shape, and convenience of the workshop. N.B.—See also instructions for boiling by fire heat.

FRUIT PULPING, STRAINING, AND SEPARATING MACHINE.



This machine is very useful to large makers for extracting pips, stalks, stones, &c., from raspberries, strawberries, currants, plums, apples,

dates, &c. The best are made with copper cylinders, copper lined feeding head, and the shaft cased with gun metal. This prevents the iron from touching and discolouring the fruit. Several tons per day may be pulped through a good machine.

GOOSEBERRIES.

About the first fruit of the season of service to a jam maker are gooseberries. As soon as they are full grown (but not ripe) they make good jam, excellent jelly, while the juice and pulp are useful as a body for many fruit jams and jellies, such as black currant and red currant, strawberries, &c., in fact, gooseberries are second only to apples as a universal and reliable ingredient for improving, giving body, and brightening the more expensive fruits when perhaps a little off colour.

GOOSEBERRY JAM, by Steam, No. 1.

112-lbs. Gooseberries. 96-lbs. White Sugar.
Water.

Process.—Put the berries first in the pan, then the sugar, add a pailful of water, turn on the steam, and commence to stir with a long stick until the sugar melts; then only occasionally; when it commences to boil, the bulk will rise in the pan and throw off a lot of steam; as it goes on boiling, the cloud of steam will gradually get less; as the boil gets thicker it gets darker; now commence to try it with a flat stick, having a sharp edge; dip the stick into the boiling jam; lift it out again immediately and hold it before your eyes; at first, the liquid will run off thin; keep repeating the process and you will notice every succeeding time you look at the falling syrup from the stick it will get thicker, until it will drop off in webs or flakes, then the jam is done. Shut off the steam at once, turn the contents into a cooler and fill into packages.

Of course to try the jam in this way, requires practice. However, the knack is soon acquired. From the time it commences to boil until finished, with a supply of steam at 40 pressure, would be about twenty minutes. N.B.—The above was the writer's proportions when the fruit

was in fair condition. If the fruit is very green, use a little more sugar; if ripe, a little less. A steam pan of the ordinary type will boil this quantity.

GOOSEBERRY JAM, No. 2.

112-lbs. Gooseberries — 35-lbs. Glucose.
70-lbs. White Sugar. — Water.

Process.—Put the berries, sugar, and water in the pan; turn on the steam and stir till melted, then add the glucose and boil off as for No. 1

RASPBERRY JAM, No. 1.

60-lbs. Raspberries. — 60-lbs. White Sugar.
1 Pailful Gooseberry Juice or Water.

Process.—Where jam is made in quantities, fruit generally arrives picked free from stems. Raspberries should be used as quickly as possible. They soon loose colour and turn sour if kept any length of time. Put the above quantities into the pan, turn on the steam, and stir till the sugar is dissolved; then only occasionally, till ready. The process is the same as for gooseberry jam, No. 1. If water is used instead of juice, 56-lbs. sugar will be enough.

RASPBERRY JAM, No. 2.

60-lbs. Raspberries. — 14-lbs. Glucose.
45-lbs. Sugar. — Water or Gooseberry Juice.

Process.—Same as for No. 1, gooseberry. Glucose is no improvement and very little saving on cost.

STRAWBERRY JAM.

60-lbs. Strawberries. — 60-lbs. White Sugar.
Gooseberry Juice or Water.

Process.—Same as for No. 1, gooseberry jam. A pailful of gooseberry juice is a great improvement; if water is used, 54-lbs. sugar will be sufficient.

WHOLE FRUIT STAWBERRY JAM, by Steam.

60-lbs. Strawberries, freshly picked. 60-lbs. White Sugar.
Gooseberry Juice or Water.

PROCESS.—Put the sugar in the pan with a pailful of juice or half a pailful of water, turn on the steam, and let the contents boil until the syrup is pretty thick; now drop in the fruit gently without crushing it; continue the boiling until done, which may be tried in the usual way. If the strawberries have a tendency to flow over the pan, add a few drops of salad oil or a small portion of fresh butter, about half the size of a walnut. When the jam has been turned into the cooler, stir the batch well up, so that the syrup and fruit will be evenly distributed. The gooseberry juice will cause it to congeal better; if water is used, 54-lbs. sugar will be sufficient.

BLACK CURRANT JAM, by Steam.

60-lbs. Black Currants. 60-lbs. White Sugar.
Gooseberry Juice or Water.

PROCESS.—The same as for gooseberry jam, No. 1. The currants in this case would be picked by hand free from stems.

BLACK CURRANT JAM, by Steam, No. 2.

60-lbs. Black Currants. 60-lbs. White Sugar.
Gooseberry Juice or Water.

PROCESS.—Put the currants in the boiling pan with a pailful of water, turn on the steam, and stir the contents until they boil for about ten minutes, when the fruit will be soft; then pass it through a small sieve or pulping machine and replace it in the pan; add the juice and sugar and boil off as usual.

RED CURRANT JAM.

60-lbs. Red Currants. 56-lbs. White Sugar.
Gooseberry Juice or Water.

PROCESS.—As for black currants.

PLUM JAM.

112-lbs. lums. 96-lbs. White Sugar.
Apple Juice or Water.

Process.—Exactly as for gooseberry jam. Apples are generally in season when plums are ready for jam making. The juice from apples is to be preferred to water.

DAMSON JAM, No. 1.

112-lbs. Damsons. 100-lbs. White Sugar.
Apple Juice or Water.

Process.—Same as for gooseberry jam.

DAMSON JAM, No. 2.

112-lbs. Damsons. 80-lbs. White Sugar.
28-lbs. Glucose.

Process.—As for gooseberry jam. Glucose may be used for either plum or damson; it may cheapen the bulk, but will not improve the jam. Jam, in which glucose has been added, is denser, consequently, in small packages, where the preserve is practically sold by measure, there is not much gain by the addition.

APPLE JELLY.

Fill the steam tub three parts full of clean cooking apples; put on the cover and turn on the steam; let them steam away for about twenty minutes, then shut off the steam; remove the cover and see if they are all smashed and pulpy; if not, give them a little more steaming, then, with a long spaddle, bruise any that may not be broken against the side of the tub; fill up the tub to the top with cold water and again turn on the steam till it boils, then strain through jelly bags. Put into the jam pan three pailfuls of this juice, straining through muslin or a fine hair sieve, together with 21-lbs. of best white sugar, and boil with a pressure of not less than 40. Stir till the sugar dissolves and boil until the jelly hangs in webs upon the stick, then shut off the steam; remove the skum and pot; while the filler-out is at work, an assistant, with a

spoon, should follow to crack any bubbles and remove any further skum. N.B.—No glucose should be used in jelly making. The boil may be slightly tinged with red colour, it will make the jelly look richer.

APPLE PULP.

As a foundation for all cheap jams, no fruit is so useful as the apple. The pulp is the body of "Mixed Fruit Jams," fruit preserves, and nearly all the jams sold as flavoured "so and so." It would be impossible to give formulæ for all sorts of cheap jam, because the mixing very much depends on what fruit the maker has available. Apple pulp itself makes a good wholesome jam, but is improved by the addition of plums, damsons, raspberries, &c., consequently, the mixing will be regulated according to the price at which the product is sold and the value of the different pulps in stock, which vary every season. To make the pulp, fill the steam pan full of good cooking apples, put on the cover and turn on the steam and let it blow for some twenty minutes, then take off the cover and, with a long spaddle, crush any that may remain whole against the side of the tub, then replace the cover and give them another ten minutes steaming, the pulp is then ready for immediate use or storage. N.B.—It may be necessary to put some heavy weights on top of the steam tub cover before turning the steam on, as it is likely to be blown off.

APPLE JAM (by Steam).

56-lb. Apple Pulp.	1-oz. Citric Acid.
54-lbs. White Sugar.	Colouring.

Process.—Pass the pulp through a cane sieve, fine enough to keep back the pips; put the ingredients in the pan with half a pailful of water; turn on the steam, stir till the sugar is dissolved, and boil off in the usual way; tinge a light pink.

MIXED FRUIT JAM (by Steam), No. 1.

40-lbs. Plums.	76-lbs. White Sugar.
40-lbs. Apple Pulp.	½ Gallon Water

Process.—Same as usual.

MIXED FRUIT JAM (by Steam), No. 2.

40-lbs. Plums.
40-lbs. Apple Pulp.
56-lbs. Sugar.
28-lbs. Glucose.

Process.—As usual.

RASPBERRY FLAVOURED JAM.

56-lbs. Apple Pulp.
14-lbs. Raspberries.
56-lbs. White Sugar.
½-lb. Gingely (or Turkey) Seed.
Colouring.

Process.—As usual. Black currant, red currant, and strawberry flavouring is made in the same way, except the gingely (or Turkey) seeds—leave them out, of course.

CHEAP JAMS.

We have given four formulæ for cheap jams, but they are given as a guide, and must not be taken as stereotyped. The nature of the apples and consistency of the pulp differ so much, it would be impossible to be exact. However, we have given the principle on which jams are made. The chief difficulty with most people is to so manipulate and mix so as to reduce the cost to the bottom. One of the principal ingredients necessary for this is a little common sense. Always calculate to have in the *finished* article at least half its bulk in sugar or sugar and glucose, or it will not keep. Jam, when well boiled, with proper proportions, should be bright, free, and congealed. If it is tough or syrupy, it contains too much sugar ; if it is soft and watery, it lacks boiling, and, perhaps, a little more sugar. For other cheap jams, see under.

DRIED FRUIT IN JAM.

Dates, figs, raisins, currants, and other dried fruits have all figured in "Fruit Preserves." They never made a good jam, but when sugar was much dearer, they were useful, because they were economical.

We do not now meet them so often, nor is it advisable to use them. Sugar is so cheap, that the difference in cost is very little, if any. Dates were generally selected in preference to the other fruits of this class, having a less distinctive flavour and more suitable for mixing.

They are pulped in the same manner as apples, but take much longer to soften in the steam tub and require a few pailfuls of water added. When quite soft, they are rubbed through a coarse iron sieve to keep out the stones. This pulp is then mixed with the apples and other fruit pulps and boiled off in the ordinary way. About 6 to 10-lbs. sugar is allowed for each pailful of date pulp.

PULPING FOR STOCK.

Pulping for stock is an important matter to jam makers, as the success of a winter trade very much depends upon the condition of the fruit pulp when required for use. Improper preserving or careless packing may lead to serious loss, and often ruin to a business; therefore, it is in the interest of proprietors to see this carried out personally in many cases. There are several methods which we describe, perhaps the most popular is the first, but it is rather costly, on account of the quantity of jars necessary. However, barrels may be substituted where circumstances make it necessary.

Break up some bar sulphur, put it in an iron pot, and melt it by putting this pot on a furnace plate, or near a fire. Now get some unbleached cotton and cut it up into strips, about half a yard long and about 1½-in. wide; dip one end of them in the melted sulphur; let them soak about half way up; separate them and lay them on a table to dry, when they will be ready for use. Have a number of clean jars, with narrow necks, ready; light the sulphured end of the piece of cotton and put it in a jar, letting the whole of the sulphured part hang inside and the plain part outside; push in a bung in the neck, just tight enough to exclude the air. In a few minutes the air will be exhausted and the light go out. The rag must then be removed and the jar filled up quickly with the hot pulp, the bung driven in and waxed over. The same process exactly applies to casks, which must be sound and air-tight; have the sulphur rag a little larger, and see that the bung fits well. Where large quantities are put away, it is well to keep a lad sulphuring, then the operation is methodical and the supply continuous. Bush's preservative, or salicylic acid, are used as a preservative in many establishments. The former simply requires mixing. To use the latter, dissolve 4-oz. of salicylic acid in 16-oz. of

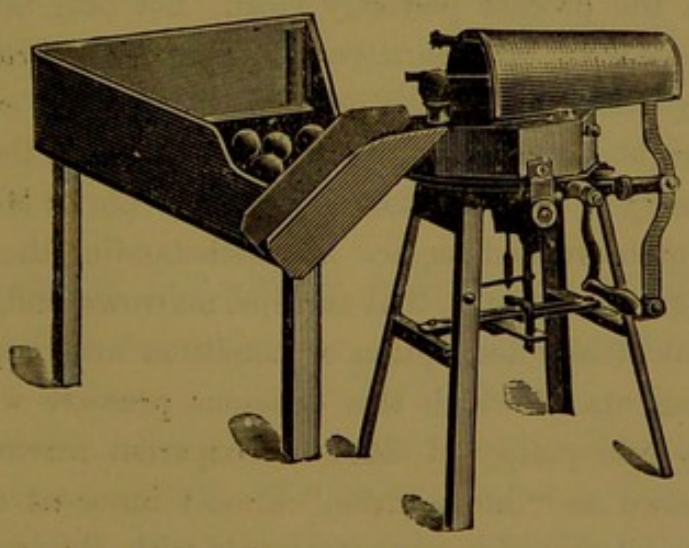
spirit of wine; pulp the fruit by boiling in a clean pan till quite soft, then add two ounces of this solution to each cwt. of fruit and well stir it in; store the fruit in air-tight casks or jars.

If casks are used, in either case, it is well, after a day or two, to bore a hole with a gimlet. A little air will immediately escape. Have a wooden peg ready and drive in the hole directly.

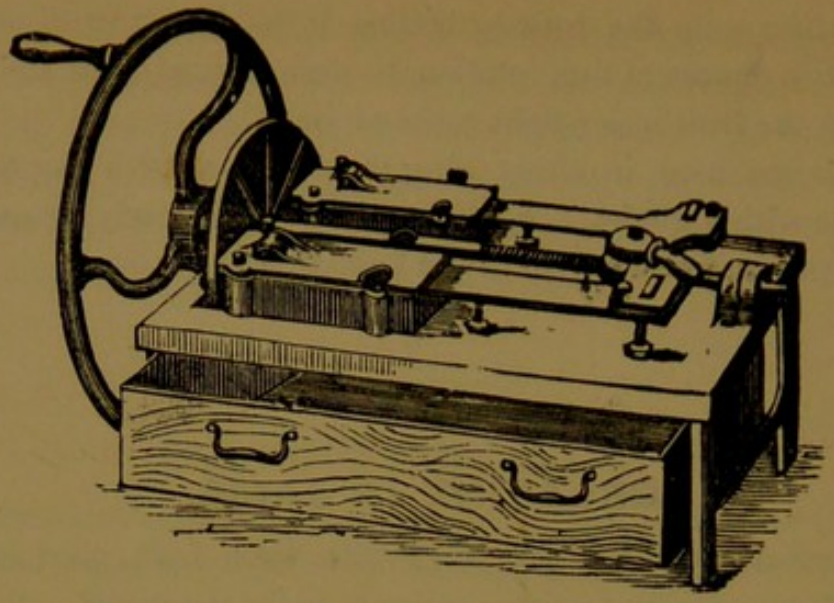
GELATINE IN JAMS.

We have before stated that jam made with fresh fruit, good sugar, and well boiled, requires no foreign matter to make it congeal. Sometimes when pulp has gone a bit wrong and no fresh fruit procurable, makers are in a fix to get a sloppy substance to set. In this case, soak a few sheets of good gelatine by covering them with cold water for at least twenty hours, after the jam has been made, but while hot stir one or two sheets into the boil till dissolved; when the batch is cold, it will no doubt be stiff enough. Exact quantity cannot be given, as it will depend on the size of boil and condition of pulp. A little goes a long way.

MACHINES FOR MARMALADE MAKING.



ORANGE QUARTERING MACHINE.



ORANGE SLICING MACHINE.

Up till quite recently (1893), marmalade makers had to content themselves with a machine for slicing the orange rinds in suitable thickness for marmalade making, while the quartering had to be done with a knife in the old style. We have now a new machine for this purpose, with which a boy or girl can cut 22 oranges, any size, per minute. This is a great saving in time and labour, well worth the attention of large makers.

MARMALADE.

To make good marmalade great care is necessary. Have everything connected with the process perfectly clean, not only the pans, tools, benches, and packages, but the ingredients as well. Fruit, sugar, and water must be free from specks or dust, as any and every impurity shows in the bright, transparent, and delicate tinge of the best article. It is also necessary to use good, sound, heavy Seville or Malaga oranges, and the best Dutch crushed sugar. Notwithstanding the idiotic theory held by many ignorant people, that turnips, marrows, and, in fact, vegetables and fruits of any description or condition were some, if not the principal, ingredients of which this delicious preserve was composed. There is a very fine quality of almost transparent marmalade now in the market, known as "home-made," almost innocent of chips, consequently not so bitter and a great favourite with children. This sort is largely made up of orange pulp, known in the trade as "Dummies."

Within the last few years, the rind only of the orange was used by some firms for making essential oils and other chemical purposes. The whole pulp they repack into boxes and sell at a very low price. The fruit is generally of good quality, and is a boon to marmalade people when pulp runs short or where the home made article is in demand.

TO PREPARE THE CHIPS AND PULP.

Put any quantity of oranges into a tub, cover them with boiling water, and let them soak for a few minutes, then pick them up, one at a time, and mark the rind with a sharp knife into four quarters ; now separate the pulp from the rind ; pack the rind, cup shape, into the boxes of the machine, and cut them into slices ; when cold, sort them over ; take out those imperfectly cut and put them through the machine again ; if well packed in the machine box in the first instance, there will be few that require recutting. Now take the slices, fill the steam tub, turn on the steam, and let them cook until tender ; try them between the finger and thumb ; when you can nip them off short, they are done, or they may be boiled in a steam pan by covering them with water, the steam turned on, and allowed to cook for nearly two-and-a-half hours ; when ready, take them out and strain through a wicker sieve.

To prepare the pulp, put any quantity into a steam pan, cover them with water, turn on the steam, and stir with a long flat stick until they are reduced to a mass of pulp ; now take them out and rub them through a cane sieve, just large enough to keep back the pips, or put them through a pulping machine with copper sieve, eight holes to the inch. Dummies are treated, of course, same as pulp.

SUPERIOR ORANGE MARMALADE, No. 1.

40-lbs. Orange Pulp. 20-lbs. Orange Chips.
60-lbs. Best White Sugar.

Process.—Put the ingredients in a pan ; stir till the sugar is dissolved, then occasionally till ready ; try it same as jam ; when it falls off the stick in flakes, it is ready ; turn it into a cooler, from which fill the packages.

ORANGE MARMALADE, No. 2.

40-lbs. Orange Pulp. 20-lbs. Orange Chips.
60-lbs. Best White Sugar.

Process.—Put the sugar, pulp, and chips in the pan; boil as usual; when almost ready, add the glucose; boil and stir it in.

ORANGE MARMALADE.

35-lbs. Orange Pulp. 45-lbs. Sugar.
20-lbs. Chips. 20-lbs. Glucose.

Process.—Put the sugar, pulp, and chips in the pan; boil as usual; when almost ready, add the glucose; stir well in and finish boiling.

HOME-MADE MARMALADE.

40-lbs. Orange Pulp, strained. 1 Gallon Best Apple Juice.
10-lbs Orange Chips. 60-lbs. Dutch Crushed Sugar.

Process.—Pass half the pulp while hot through a coarse hair sieve; mix all the ingredients together in a pan and boil off in the ordinary way. The oranges for the home-made article should be specially heavy, with a thinnish skin. N.B.—When there is a superabundance of chips and no dummies to be had, work up the surplus chips in cheaper qualities, using apple juice and glucose. When preserving orange pulp for future use, mix the pulp and chips together in the proportions for boiling.

CANDIED ORANGE AND LEMON PEEL.

Year by year the demand for candied peel increases. We find many of the large wholesale houses contracting for a supply of from twenty to forty thousand cases of oranges and lemons, besides a number of pipes of citron peel, in brine, for a seasons consumption.

The process of preserving and candying is rather a long one. From the time the fruit arrives until ready for packing, a clear month should elapse. It is possible to force through the operation in six or eight days, but the result is unsatisfactory. The salt cannot be thoroughly extracted, nor the peel perfectly permeated with syrup in this time. The oranges or lemons are first cut in half and the juice squeezed out. Small and effective machines are now used for this purpose. The lemon or orange is put in, a lever lifted, when it is cut, squeezed, and thrown out by the one operation. The juice should be saved, it has a marketable value.

Now put the peel in tubs and cover with brine; make the brine with salt and water, strong enough to float an egg; let it remain in soak for about ten days, or until thoroughly penetrated; the next process is to strain out the peel and boil in water till tender; a good plan is to test them as you would potatoes; when the fork will penetrate without force they are done, then strain off the hot water and put them into cold water, which will make them firm; now clear out the pulp with the thumb nail or a mussel shell, and throw the peel again into cold water and let it remain for two or three hours; afterwards, take it out and place them loosely, one in the other, and pack them into a vessel for syruping. Now make a thin syrup with best white sugar, sufficient to cover them; let this syrup be very thin; boil only to 215 by thermometer; pour it over the peel and let it soak in this for three or four days, then draw it off, add more sugar to it, and boil up again, this time a little thicker, say 230 by thermometer, and pour it over them and let them stand again for three or four days; again draw off the syrup, add more sugar, and boil a little thicker, say 235 and repeat the operation; at the end of four days, throw out the peel on wicker sieves and let it drain, bottoms upwards, so as all the syrup will run out. The peel is now preserved and known in the trade as drain peel. Before the candying process, the peel must be packed on wire sieves and put in the drying room for twelve hours, then taken out packed, one in the other, and put in cases till required for the last operation.

Boil sugar and water in an ordinary boiling pan to make, say three gallons of syrup, up to the degree of feather, 240; then put in carefully half a bushel of peel; let them boil through and lift off the pan; grain the sugar against the side of the pan, by rubbing with a flat stick, till it becomes cloudy; now give the whole a stir round and commence to take out each piece separately with a fork and place it on its round part on a wire tray; when cold, it will have a grained sugar coating; it is now finished, and only requires careful packing in dry boxes. N.B.—The raw peel may be preserved for almost any length of time in the brine.

TO FROST FRUIT.

Select the finest plums, cherries, apricots, grapes, or small pears; leave on their stalks; whisk the white of eggs to a stiff froth; dip the fruit in the beaten eggs, leaving the stalks out; lift them, one at a time, and

cover them with finely powdered sugar ; cover a tray with white paper, lay the fruit on it, and place in a cooling oven ; when the icing becomes firm, pack and put them in a cool place.

TO BOTTLE FRUIT.

RASPBERRIES.

The raspberries must be fresh, whole, and sound. Fill up the bottles gently, not to crush ; colour some water red and cover the fruit with it; now cork them tight with best corks, and secure them by tying them down with wire or string ; place them upright in a boiling pan, with a little hay between them ; fill the pan with cold water to the neck of the bottles, and place on a moderate fire, or a steam pan will answer the purpose ; raise the heat to 160 ; let them stand an hour, then increase the heat to 180 and let them remain another hour ; now take the pan from the fire, or turn off the steam and run off the water ; when the bottles are cold, pack them away on their sides.

GOOSEBERRIES, BLACK CURRANTS, CHERRIES, &c.

Proceed as for raspberries, but, of course, the water in the bottles should not be coloured.

PLUMS, DAMSONS, GREENGAGES.

Proceed as for raspberries, but raise the temperature in the first instance to 170, then to 185 degrees.

APPLES.

Pare and core the fruit and cut them into quarters, and proceed as for raspberries.

FRUITS IN SYRUP.

Any of the above may be preserved in syrup by adding 5-lbs. of sugar to every gallon of water used for covering the fruit.

TO CRYSTALIZE GINGER, FRUITS, &c.

When nicely finished and well packed, crystalized fruits makes a tempting attraction. Though the process is simple, judgment is required to make it successful. Care must be taken that the different sorts are thoroughly saturated with syrup and that it has penetrated right to the core before the finishing or crystalizing process is commenced, or the goods will not keep—the larger the fruit the more time they will take in soak, and the thinner the syrup must be for the first wettings. Taste must be exercised in packing that the colours and the shapes may be so blended as to harmonise.

CRYSTALIZED GINGER.

Process.—Take any quantity of green ginger, strained from the syrup, and pack in a clean tub or pan. Make sufficient syrup to cover the bulk, in the proportion of 7-lbs. of sugar to each gallon of water, and pour it on the ginger, luke warm, and allow it to remain for twelve hours, then strain off. Now add one more pound of sugar to each gallon of syrup and reboil; pour the syrup this time over the ginger while hot and let it remain in soak two days and two nights, when it must be strained off again and reboiled with 1-lb. additional sugar to each gallon. Now pour the syrup again over the ginger and let it remain for 24 hours longer; again drain the ginger as dry as possible from the syrup and stand in drying rooms for about three days, or until dry. Now make a boil of sugar, with the usual quantity of water and a pinch of cream of tartar, to a soft ball; remove the pan from the fire and grain by rubbing a little of the syrup on side of pan (as directed for Grained Sugar Goods); now pass the dry ginger through the boil quickly; place on sieves and again in the drying room until hard. Now to finish, prepare a syrup with the usual proportion of sugar and water and boil to 220. Pack the ginger in crystalizing tins and cover them with this syrup when partly cool. Put them in drying room for another 12 hours. Now drain of the goods, pack on trays, stand in a warm place; when dry, pack for sale.

CRYSTALIZED FRUITS.

The fruits used for the purpose have generally been preserved in syrup

till required. Drain the fruit from the syrup; clean them off by dipping slightly in hot water and pack them in trays; stand in drying for ten or twelve hours to dry. Now pack them carefully in crystalizing tins and make sufficient syrup in the usual way, boiling to 217. Stand the syrup aside till coolish, then cover the fruits with it; stand the tins in the drying room all night; drain off in the morning; when dry, knock the goods out, carefully sort them out on trays; when thoroughly dry, pack.

CORDIALS.

Books might be and are written on this subject alone, where a shadow of information is hidden in a cloud of words, where the specific gravity of simple syrup is discussed to a decimal of three figures. Although I do not pretend to work on so fine a scale, at the same time, the following recipes, short, crisp, and simple, as they may seem, are by no means a rule of thumb sort of an arrangement, but the results which experience has taught to be the sufficient and most successful formulæ.

RASPBERRY CORDIAL.

6-lbs. White Sugar.
¾-oz. Tartaric Acid.
1½-oz. Essence of Raspberry, ordinary quality.
2 Quarts Water.
Raspberry Colouring.

Process.—Put the sugar and water in a clean pan, let it just boil, then remove the pan from the fire, and add the acid, then the colouring, and, when about lukewarm, the essence. N.B.—The essences used for cordial are non-concentrated quality. They give a pure fruity flavour.

GINGERETTE.

6-lbs. White Sugar.
¾-oz. Tartaric Acid.
2 Quarts Water.
¾-oz. Essence of Gingerette.
¼-oz. Soluble Essence of Capsicine.
Spirit Colouring.

Process.—Exactly as for raspberry.

CLOVE CORDIAL.

6-lbs. White Sugar. ¾-oz. Soluble Essence of Clove.
¾-oz. Tartaric Acid. 2 Quarts Water.
Spirit Colouring.

Process.—Exactly as for raspberry.

PEPPERMINT CORDIAL.

6-lbs. White Sugar. 1½-oz. Soluble Essence of Peppermint.
2 Quarts Water.

Process.—As for raspberry. Note.—Pear, pine apple, elderette, orange, noyeau, cherry, &c., &c., are all made the same way, in fact, the chemists has prepared a long list of cordials, in the shape of essences from fruits and soluble essences from essential oil. Be careful to use soluble essences and not oil.

GINGER BEER.

9-lbs. White Sugar. 1-oz. Cream of Tartar.
10-ozs. Jamaica Ginger. 1-oz. Tartaric Acid.
10 Gallons of Water.

Process.—Put the ingredients in a perfectly clean vessel; bring the water to the boil, and pour over them, and allow the whole to macerate until barely lukewarm (frequently stirring), then add a ½-pint good brewers' yeast and stand it in a warm place to ferment. Before fermentation has ceased, draw off the liquor clear by means of a tap, fixed about an inch from the bottom of the tub, then strain through a jelly bag to get perfectly clear and bright, then bottle and tie down the corks, with wire or string.

SUPERIOR GINGER BEER.

Proceed according to the last recipe, using five gallons of water, ¾-oz. of cream of tartar, ½-oz. tartaric acid, the whites of two eggs, four lemons sliced thin, ½-oz. German yeast. Ginger beer, as a rule, does not sell so well in winter, and is therefore kept in bottles for a considerable time before being sold out, in this case do not force it with eggs and yeast, but make according to this recipe, leaving out these two ingredients.

SPARKLING AERATED GINGER ALE.

WITHOUT MACHINERY.

Put four gallons of clear soft water into a clean cask or earthenware pan, with a wooden tap inserted about an inch from the bottom, mix with this water about 6-ozs. of best carbonate of soda, allow this to stand twelve hours to settle, then draw it carefully off into another tub by means of the tap; do not disturb the sediment which settles to the bottom of the first tub. Mix with this quantity 2-lbs. of loaf sugar, stir until the sugar is dissolved, flavour with the extract of ginger ale, colour with burnt sugar or liquid colouring prepared for the purpose (see list), then fill glass lemonade bottles with the usual quantity, and to each bottle add two scruples of crystal tartaric acid, drive in the cork immediately and tie it down and wire in the usual way; in one hour, or as soon as the acid is dissolved, this ale is ready for use, and will open with a sharp report. The action of the acid upon the soda produces carbonic acid gas in the bottles, but the flavour is not equal to that made by machinery.

SPARKLING LEMONADE.

This may be made in exactly the same manner as the last flavour with the soluble essence of lemon; use no colouring. In drawing the water from the cask in which the soda has been mixed, draw it as clear as possible; the soda which has fallen to the bottom is of no use, and if stirred up, will only muddle the liquid.

HOREHOUND BEER (Fermented).

To make six gallons. Make an infusion of 1½-ozs. of quassia with twelve sprigs of the herb horehound, boil with part of this liquid twenty-four cayenne pods for twenty minutes, then add six fluid ounces of lime juice and 1½-ozs. of Spanish juice (dissolved in cold water); strain this mixture and put it with six gallons of cold water with 2-lbs. of brown sugar, colour it with burnt sugar. Allow the whole to work four days. Now take two quarts of it and warm it rather warmer than new milk and mix with this eight tablespoonfuls of good brewers' yeast and stand it in a warm place till in a state of brisk fermentation, then mix it with

the rest of the liquor, in a few hours it will be all in full work. Give it a stir twice a day for the first two days to promote fermentation ; keep it from contact with cold air for the following two days and skim the top off as it gets yeasty. The beer must now be drawn off as clear as possible into a clean vessel by passing it through flannel or a filtering bag. Clean the tub well and return the liquid to it and add half a drachm of dissolved isinglass (pure), stir the whole well together and put a cloth over the tub and also the lid on it to exclude the air as much as possible, in thirty hours the beer may be bottled off. In summer this will be ripe and fit to drink in eight days. A superior quality may be made by putting a small piece of sugar into each bottle just before corking.

Horehound beer made according to the above recipe is equal in every way to that of the best makers ; besides being a pleasant and palatable beverage, it is a wholesome tonic ; it is used largely and appreciated in the north of England, and where shopkeepers have convenience for making, the sale ought to be encouraged, as it is very profitable. It may be as well to state the herb horehound is very bitter and care must be exercised not to use too much of it. The flavour may be varied according to the di-cretion or to suit the palate of the neighbourhood.

SPRUCE BEER

Ten gallons of water, 6-lbs. of treacle or lump sugar (according to colour required), and 4-ozs. of the essence of spruce ; add yeast, and ferment as for ginger beer.

TO MAKE SEIDLITZ POWDERS

5-ozs. Tartarised Soda. 2-ozs. Carbonate of Soda.
1½-oz. Tartaric Acid, pulverised.

Process.—Mix the tartarised soda with the carbonate of soda, pass through fine sieve two or three times, divide this quantity in twenty equal parts and wrap each in blue paper ; divide also the tartaric acid into twenty equal parts and wrap each in white paper ; these two packages are tied together and sold as one.

In using, dissolve the contents of the blue paper in a tumbler three-parts full of water, add the contents of the white paper and stir well, which will cause it to effervesce, when it must be drank immediately.

TO MAKE GINGER BEER POWDERS

10-lbs. Powdered Sugar. 2-lbs. Carbonate of Soda.
2½-lbs. Tartaric Acid. 2¼-ozs. Powdered Ginger.
¼-oz. Essence of Lemon.

Process.—Mix the ingredients and pass them twice through a fine sieve. It is then ready for sale. Usually done up in penny packets. Make the packets air-tight—if exposed to the air, they will loose their virtue.

TO MAKE BAKING POWDER

12-ozs. Tartaric Acid. 2-lbs. Cream of Tartar.
3-lbs. Bi-carbonate of Soda.

Process.—See that the ingredients are thoroughly dry. Now mix them together, first with the hands, then pass them two or three times through a fine sieve. Bottle off as quickly as possible, and cork air-tight.

THE PURITY OF CONFECTIONERY.

Sugar, the principle ingredient used in all kinds of sweets, has now become so cheap that confectionery made in any part of Great Britain may be considered comparatively pure, no doubt isolated cases may occur where resort may have been made to increase the bulk by the substitution of something even cheaper than sugar, but happily these cases are few and far between. When the writer first entered the trade, and during his apprenticeship, things were different, sugar was much dearer, and the confectioner's knowledge of colours did not seem to be fully developed, and in many cases ingredients were used for this purpose, which to say the least of them questionable. Sugar was mixed with foreign matter, in the shape of an article called terra alba (ground Derby stone), and made into lozenges, and other matters all more or less deleterious were used to increase the bulk when manufactured, however, things are altered, sugar is cheap, vegetable colours are now specially manufactured for the trade, and generally speaking every article used in the manufacture of sweets, especially by large houses, is strictly wholesome. The very small amount to be gained by resort to adulteration of any kind is not now tempting enough to induce even those who otherwise might entertain the idea, besides the Adulteration

Act of 1872 holds out a very wholesome dread to unprincipled manufacturers, as its penalties are very severe upon the adulterator. The offender renders himself liable on conviction for the first offence to a penalty of £50, and for the second goes to jail for six months with hard labour. These facts, coupled with the small amount of gain which would be derived from such practices, renders the buying and consuming of confectionery a matter of comparative safety. However, should the reader wish to test the purity of any article of confectionery, he may do so as follows:—Put a few of the sweets you wish to test into a glass vessel and pour over them some hot water, and let them stand twelve hours, after which time they, if pure, should be dissolved and amalgamated with the water, as sugar is perfectly soluble in water; in the case of comfits and lozenges, a little wheaten flour or starch powder is necessary to be used in making therefore a small sediment would fall to the bottom; this, if required, could be easily dried and examined with a microscope for foreign matter.

E. S.

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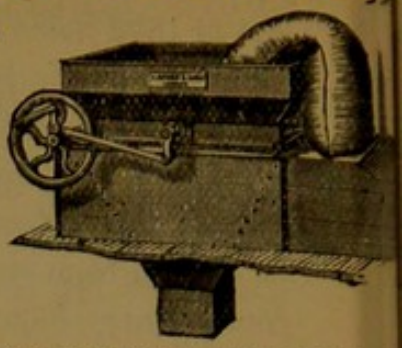
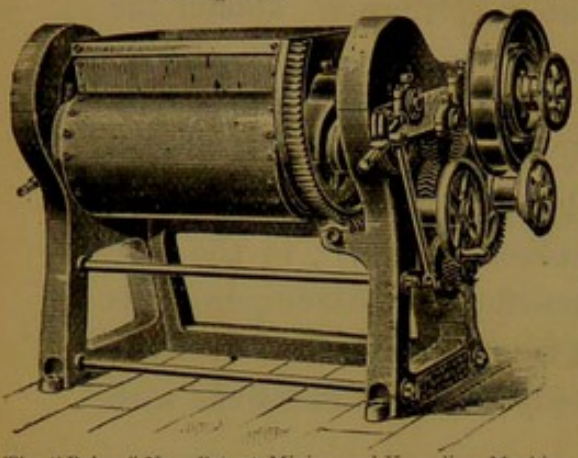


Patent Flour Sifting and Mixing Machine.



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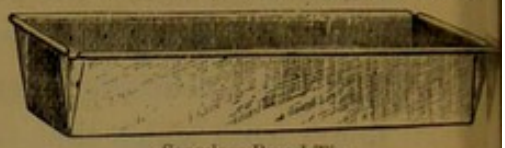

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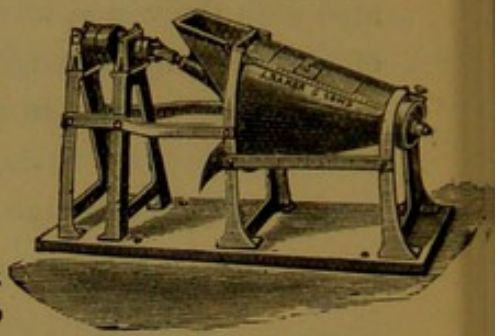

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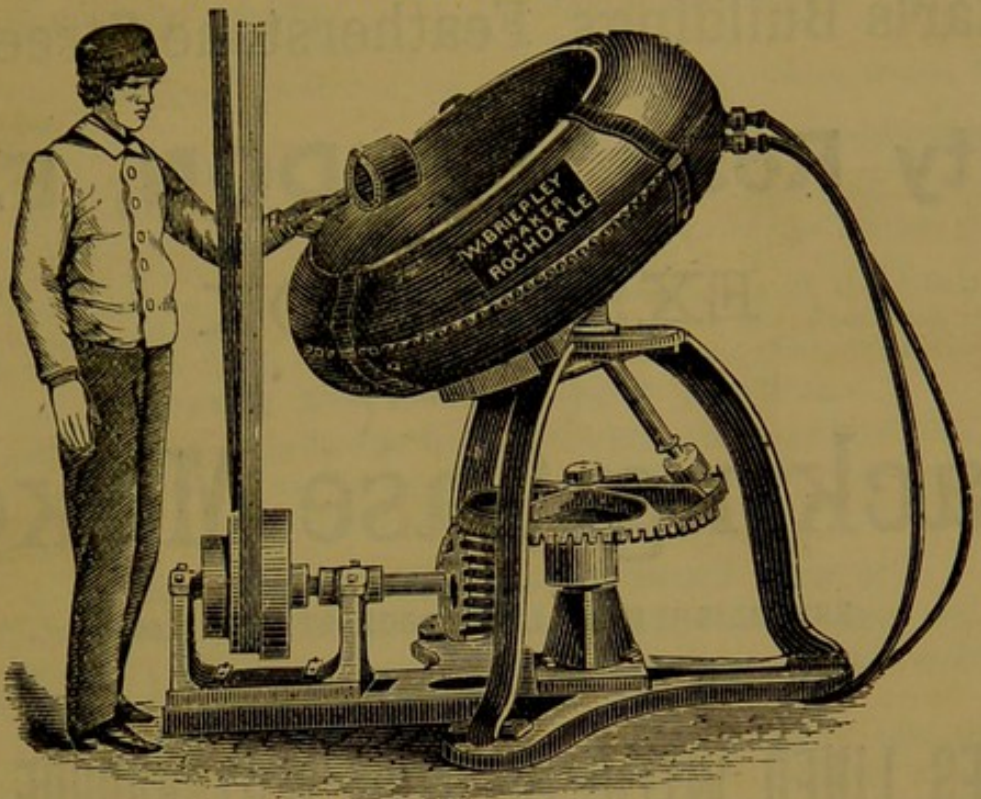
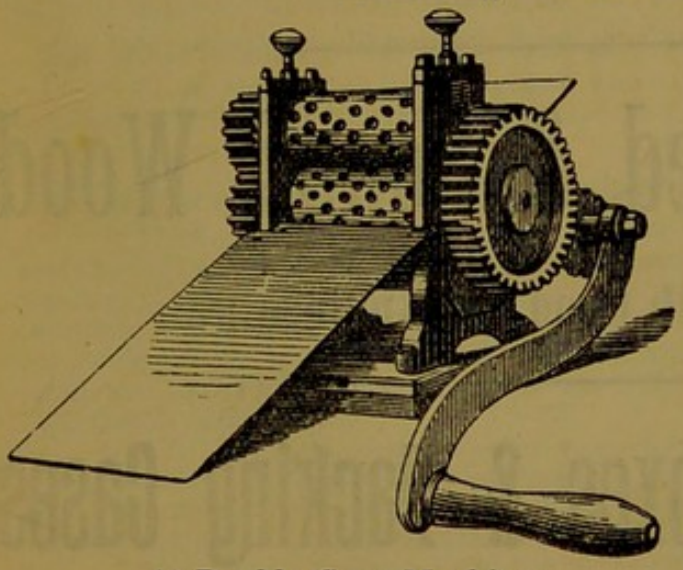


Oscillating Steam Comfit Pan.



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"As a monthly it was an invaluable means of information to our trade, but since the change referred to, it has been an indispensible necessity to us as Bakers and Confectioners, &c."

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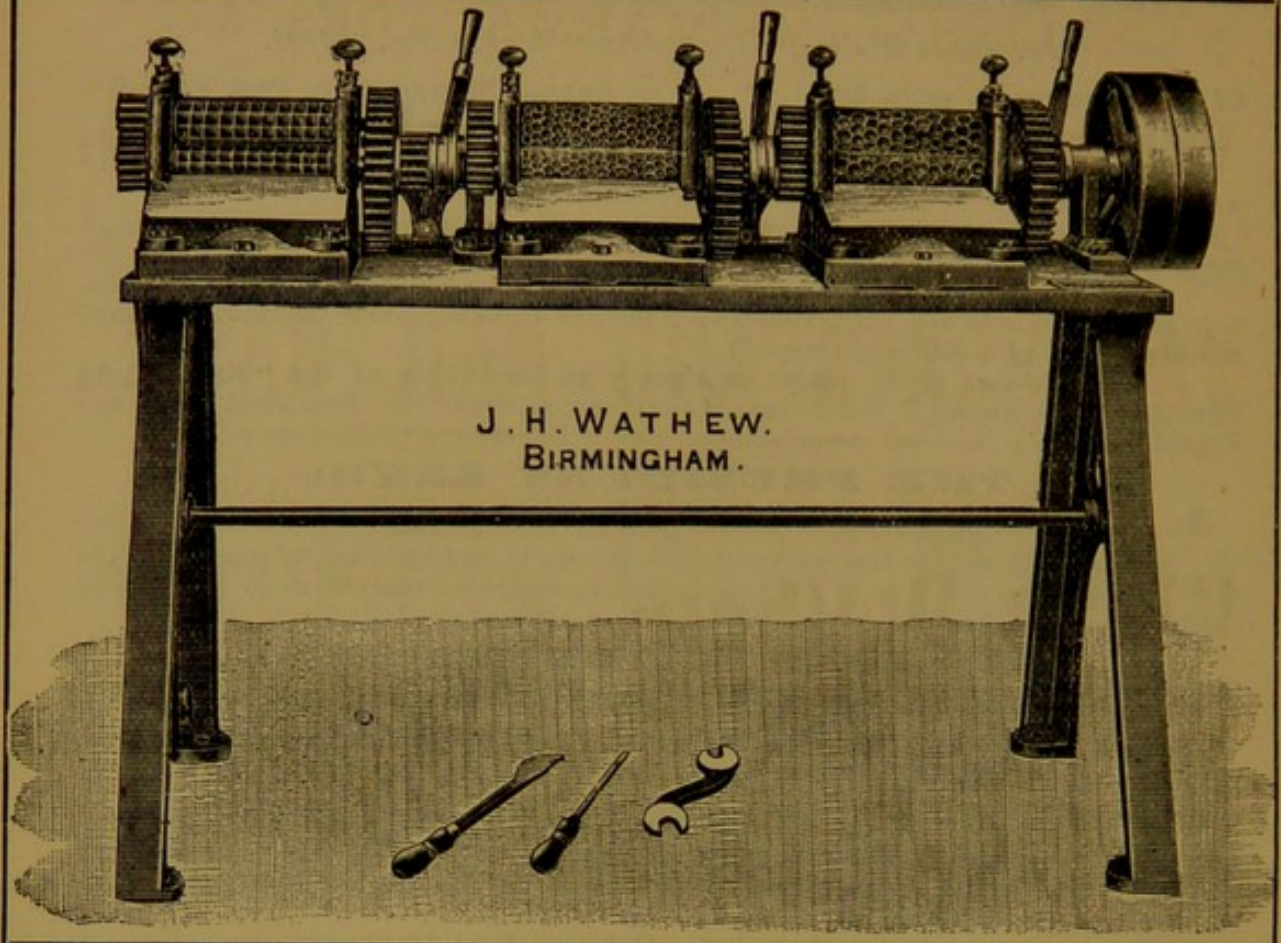

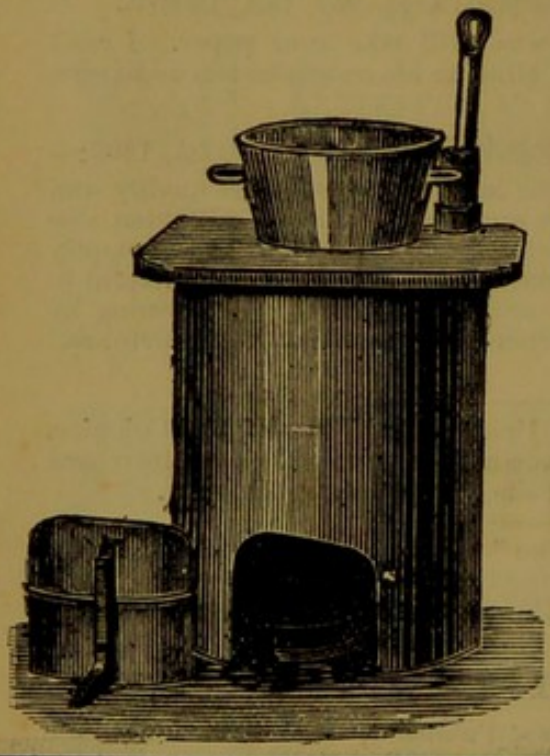

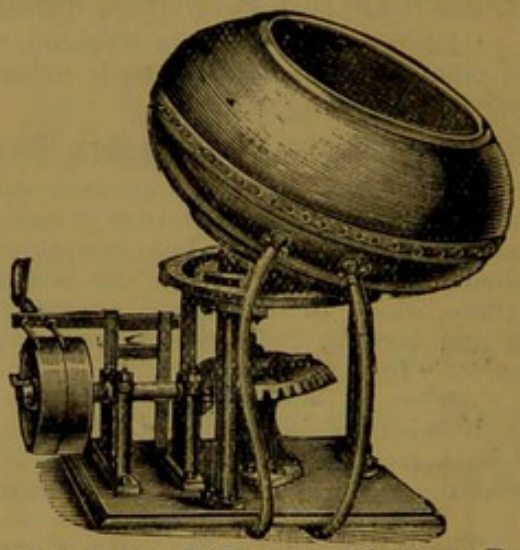

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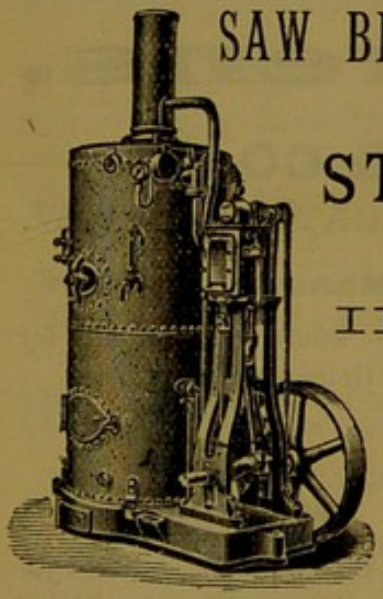

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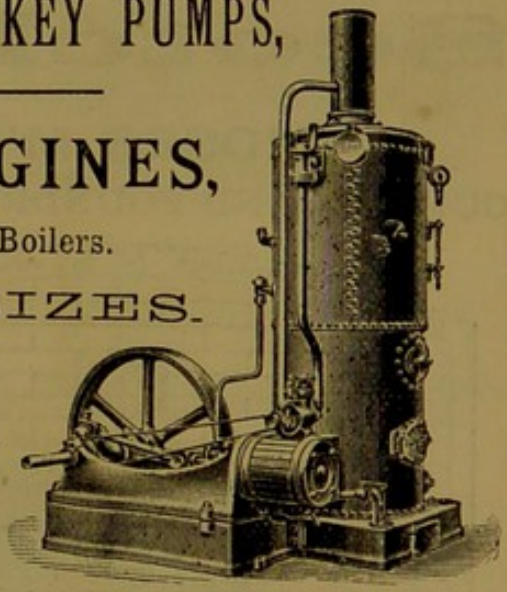

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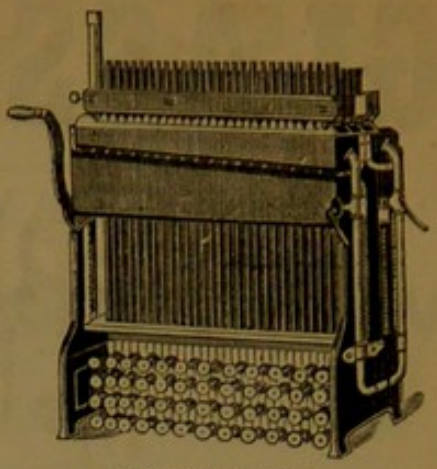

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Illustrated bound book "HOW TO MAKE ICES,"

1/- Post Free.

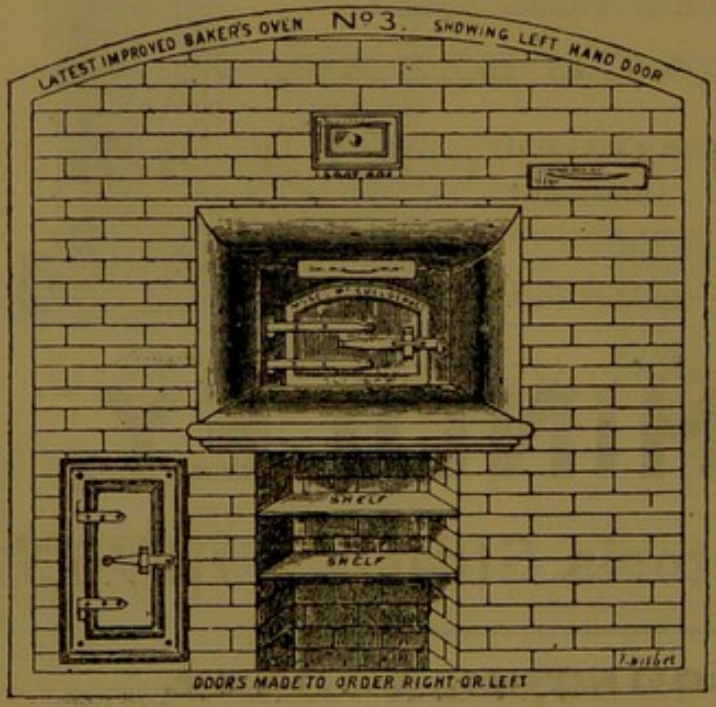
Makers of the Celebrated Improved "CROWN" Ice Cream Machines, Pewter Freezers, making one or two Ices at a time.

10 Years in use (see Testimonials).

Scotch Ovens.

MOSES M'CULLOCH & CO.,

CUMBERLAND FOUNDRY, 168 GALLOWGATE, GLASGOW.



Manufacturers of

All kinds of Ironwork for Home and Export Sale.

MAKERS OF

Bakers' Oven Mountings with latest improvements, Stable Fittings, Lamp Pillars and Brackets, Gates, Railings and Stairs, Wall Windows and Rooflights, Prismatic Pavement Lights, Tanks and Boilers, Rain Water Goods, Mall. Iron Doors, Columns and Beams, and all kinds of Builders' Castings.

SKUSE'S TABLETS

HERBAL

The Favourite Confection

"Open your mouth and shut your eyes and find what luck is sent you"

FACTS

Have the Largest Sale in the World.

The Flavour Piquant.

The Ingredients Choice.

The Blend Unique.

All who Use them Recommend them.

Prepared from Anniseed, Horehound, Coltsfoot, Marshmallow, Tolu, Honey, Peppermint, etc.

Sold by Confectioners Grocers, and Chemists everywhere

IN TINS CONTAINING 3 OUNCES, 3D.

WHOLESALE PRICE:

6 doz., Carriage Paid, (doz. 2/3) 13/6.

E. SKUSE, Ashmore Works,

HARROW ROAD, LONDON, W.

DEVONA

The most Delicious Sweetmeat yet brought before the Public.

1d. and 3d. PACKETS, sold everywhere

Prepared from Fresh Devonshire Cream, and sold in 1d. and 3d. PACKETS by Confectioners, &c., everywhere

The Unique and Delicate Flavour of Devona is the result of its choice ingredients, producing a fragrance hitherto unattained.

The unparalleled success of this charming sweetmeat has brought the usual results—a host of imitators.

No second trial is needed to distinguish the original from the imitations.

DEVONA is beautifully got up and attractively packed in Showy Boxes, well advertised, and commands a rapid sale everywhere.

Lowest Wholesal Price, carriage paid:

1 Gross (Penny Packets),	-	9s. Nett.	
5 ,, ,,	-	9s.	Less 10 per cent.
10 ,, and upwards,	-	9s. ,,	12½ ,,

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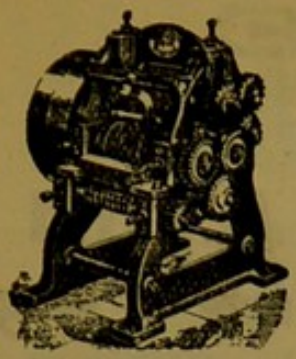
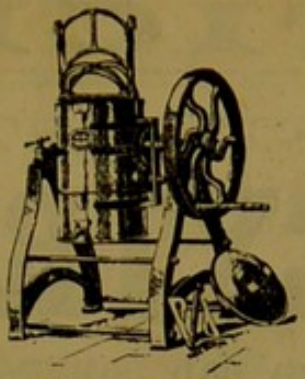
ASHMORE WORKS, HARROW ROAD. LONDON, W.

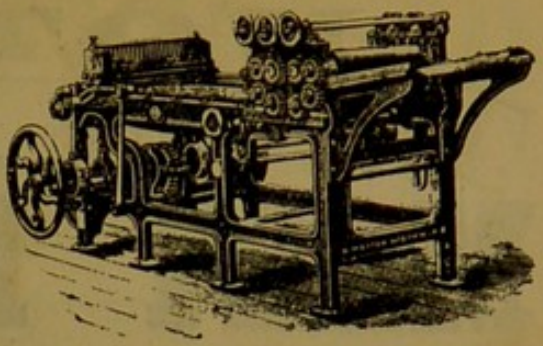
CAUTION.—There is only one DEVONA.



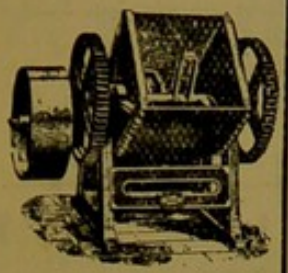
Home-made Marmalade Machine.



"Morton" Whisk and Cake Machine, on Stand for Hand.



Lozenge Machine, with Patented Printing & Delivery Arrangement.



Lozenge Dough Mixing Machine.

FOR PRICES & PARTICULARS APPLY TO

Robert Morton & Sons

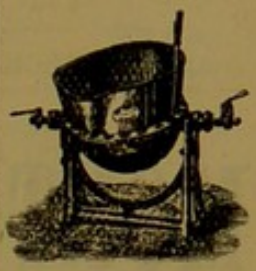
MANUFACTURERS OF

BAKERS, CONFECTIONERS, & PRESERVE MAKERS,

MACHINERY AND TOOLS,

BELHAVEN WORKS,

WISHAW, SCOTLAND.



Swing Jam Pan, with Internal Coil.

JOHN SARD & SONS,

TIN, IRON,

AND

Zinc Plate Workers, &c.,

44 DUKE STREET,

ALDGATE, E.C.

Stencil Plates, Stock Tins, and every description of Filtering Apparatus and General Repairs to Order.

WAXED TISSUES

(THICK AND THIN).

White and Coloured Wax Papers.

Waxed Parchment, &c., &c.

EVERY DESCRIPTION MANUFACTURED.

Best Quality only specially made for Confectioners Use.

Supplied in Sheets, Rolls, cut to sizes, Circles, &c.

TISSUE SHAVINGS

FINELY CUT, WHITE AND COLOURED.

200 DIFFERENT SHADES MANUFACTURED.

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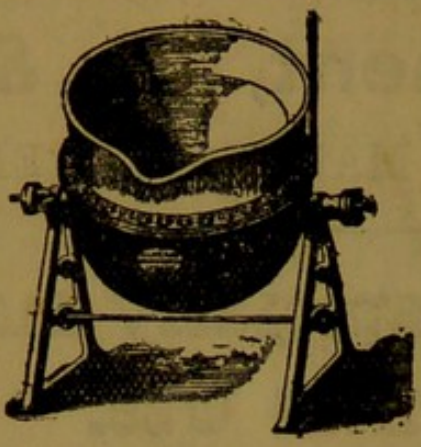
Telegraphic Address—"WAX PAPER," London.

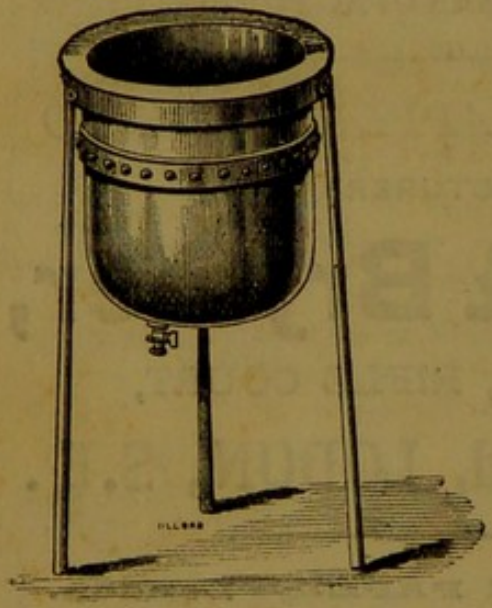
J. LAVER & SON,

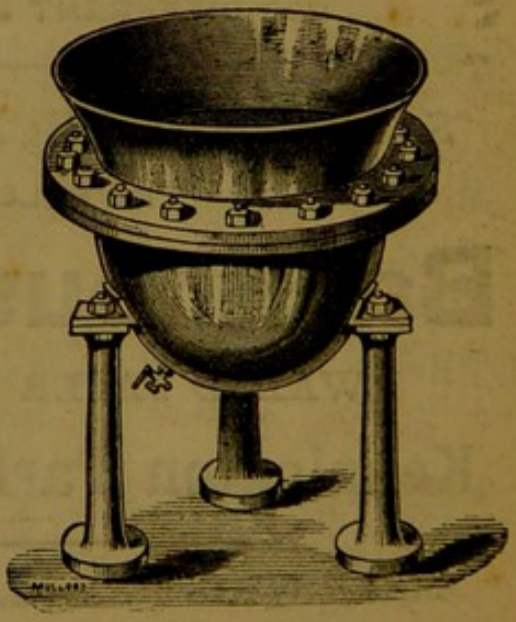
COPPERSMITHS, STEAM PAN MAKERS, &c., FOR

Confectioners, Jam Makers, Pickle and Mineral Water Manufacturers, &c.,

92 & 93, HOUNDSDITCH LONDON, E.







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LIMITED,

LEEDS,

MANUFACTURERS OF

HEALTH

COCOA

Supply Block Cocoa, Cocoa Butter, Ground Cocoa-shell, for Confectioners Use.

Samples supplied on application. Price, in all cases, as Low as possible, compatible with quality.

PROMPT DELIVERY.

N.B.---If desirous to open Credit Account, send references to well-known houses, with order.

WRITE FOR SAMPLES AND QUOTATIONS.