RECEIPTS FOR PERFUMED SPIRITS.

**Essence of Dill (Esprit d'Aneth).**
Seeds of dill (anethum graveolens) 6 kilog., 250 grms.
Alcohol, 85° . . . . 52 litres.
Product, 50 litres.
Process as above.

**Essence of Aniseed (Esprit d'Anis).**
Aniseed (pimpinella anisum) 6 kilog., 250 grms.
Alcohol, 85° . . . . 52 litres.
Product, 50 litres.
Process as above.

**Essence of Star Anise (Esprit de Badiane).**
Seed of star anise (anisum stellatum) 6 kilog., 250 grms.
Alcohol, 85° . . . . 52 litres.
Product, 50 litres.
Process as above.

**Essence of Caraway (Esprit de Carvi).**
Caraway seeds (carum carvi) 6 kilog., 250 grms.
Alcohol, 85° . . . . 52 litres.
Product, 50 litres.
Process as above.

**Essence of Coriander (Esprit de Coriandré).**
Coriander seeds (coriandrum sativum) 12 kilog., 500 grms.
Alcohol, 85° . . . . 52 litres.
Product, 50 litres.
Process as above.

**Essence of Cumin Seeds (Esprit de Cumin).**
Cumin seeds (cumínum cuminum) 6 kilog., 250 grms.
Alcohol, 85° . . . . 52 litres.
Product, 50 litres.
Process as above.
RECEIPTS FOR PERFUMED SPIRITS.

Essence of Candy Carrot (Esprit de Daucus).
Seeds of candy carrot (althamanta cretensis) . . 6 kilog., 250 grms.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Fennel (Esprit de Fenouil).
Fennel seeds (anethum fumiculum) . 6 kilog, 250 grms.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Fennel (Esprit de Fenouil).
Fennel seeds (anethum fumiculum) . 6 kilog, 250 grms.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Rosewood (Esprit de Bois de Rhodes).
Roots of rosewood . . . 3 kilogrammes.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Sandal wood (Esprit de Santal).
Sandal wood (santalum nytrifolium) . . 3 kilog.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Aloe (Esprit d'Aloes).
Socotrine aloe . . . . . 3 kilogrammes.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Catechu (Esprit de Cachou).
Catechu . . . . . . . . 3 kilogrammes.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Benzoin (Esprit de Benjoin).
Gum benzoin in tears, powdered . . 3 kilogrammes.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Distillation of Alcohol.

Essence of Candy Carrot (Esprit de Daucus).
Seeds of candy carrot (althamanta cretensis) . . 6 kilog., 250 grms.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Candy Carrot (Esprit de Daucus).
Seeds of candy carrot (althamanta cretensis) . . 6 kilog., 250 grms.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Fennel (Esprit de Fenouil).
Fennel seeds (anethum fumiculum) . 6 kilog, 250 grms.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Fennel (Esprit de Fenouil).
Fennel seeds (anethum fumiculum) . 6 kilog, 250 grms.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Rosewood (Esprit de Bois de Rhodes).
Roots of rosewood . . . 3 kilogrammes.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.

Essence of Rosewood (Esprit de Bois de Rhodes).
Roots of rosewood . . . 3 kilogrammes.
Alcohol, 85° . . . . . 52 litres.
Product, 50 litres.
Process as above.
DISTILLATION OF ALCOHOL.

Essence of Myrrh.

Pulverized myrrh : 3 kilogrammes.  
Alcohol, 85° : 52 litres.  
Product, 50 litres.  
Process as above.

Essence of Cassia (Esprit de Cannelle de Chine).

Pulverized cassia (laureus cassia) : 3 kilogrammes.  
Alcohol, 85° : 52 litres.  
Product, 50 litres.  
Process same as the preceding.

Essence of Cloves (Esprit de Girole).

Bruised cloves : 3 kilogrammes.  
Alcohol, 85° : 52 litres.  
Product, 50 litres.  
Process as above.

Essence of Mace (Esprit de Macis).

Nutmegs, crushed : 3 litres.  
Alcohol, 85° : 52 litres.  
Product, 50 litres.  
Process as above.

Essence of Cardamom (Esprit de Petit Cardamome).

Cardamom seeds (amomum cardamomum) : 3 kilogrammes.  
Alcohol, 85° : 52 litres.  
Product, 50 litres.  
Process as above.

Essence of Sassafras (Esprit de Sassafras).

Sassafras wood, in chips : 3 kilogrammes.  
Alcohol, 85° : 52 litres.  
Product, 50 litres.  
Process as above.

Essence of Bitter Almonds (Esprit d’Amandes Amères).

Bitter almonds : 12 kilogrammes.  
Alcohol, 85° : 52 litres.  
Product, 50 litres.  
Process as above.

Digest the cinnamon with the alcohol for twenty-four hours in the still; add 25 litres of water at the time of distilling, lute...
RECEIPTS FOR PERFUMED SPIRITS

Concentrated Essence of Lemon.
The rinds of 800 fresh lemons.
Alcohol, 85°
Product, 50 litres.
Process as above; this essence is used to aromatize lemon syrup.

Concentrated Essence of Oranges.
The rinds of 1000 fresh oranges.
Alcohol, 85°
Product, 50 litres.
Process as above; this essence is used to aromatize syrup of oranges.

Esprit d'Anisette Ordinaire.
Anise seed
Star anise seed (badiane)
Coriander
Fennel
Alcohol, 85°

Bruise the seeds in a mortar, and digest them with the alcohol for twenty-four hours; add 25 litres of water, and distill off 51 litres of the first product; then add 25 litres of water and rectify, drawing off 50 litres of perfumed spirit.

This spirit is used for anisette ordinaire, double, and demi-fine.

Esprit d'Anisette de Bordeaux.
Star anise seed
Anise seed
Coriander seed
Sassafras wood
Muskmallow (ambrette)
Imperial tea
Alcohol, 85°

Bruise the seeds, cut the sassafras in chips, distill and rectify, as in the preceding receipt.
Product, 50 litres of perfumed spirit.
DISTILLATION OF ALCOHOL.

Espirit de Curacao Ordinaire.

Dried rinds of Seville oranges (bitter) ... 7 kilogs., 500 grms.
Dried rinds of sweet oranges ... 2 " ... 750 "
Alcohol, 85° ... ... 60 litres.

Steep the orange rinds in cold water, when they are sufficiently softened remove the soft inner portion of the rind as worthless, throw the outer portions into the alcohol, and, after digesting twenty-four hours, distill and rectify according to the directions given for essence of lemon, drawing off 50 litres.

When the ribbons or strips of orange peel are used, the proportions are as follows:

Strips of Seville orange peel ... 5 kilogrammes.
Strips of sweet orange peel ... 1 kilog., 665 grms.
Alcohol, 85° ... ... 60 litres.
Product, 50 litres of perfumed essence.

Espirit de Curacao de Hollande.

Rinds of the Curacao orange ... 10 kilogrammes.
Alcohol, 85° ... ... 75 litres.

Draw off 50 litres as above, setting aside the 25 litres of phlegm for a new operation.

Essence of Coffee (Espirit de Moka).

Lagauya coffee ... ... 3 kilogrammes.
Mocha coffee ... ... 3 "
Alcohol, 85° ... ... 1 litre.
Roast the coffee slightly, reduce it to a coarse powder, digest, distill, and rectify, as for the preceding.
Product, 50 litres.

Essence of Tea (Espirit de Thé).

Imperial tea ... ... 2 kilogrammes.
Pekao tea ... ... 1 "
Hyson tea ... ... 1 "
Alcohol, 85° ... ... 52 litres.

Digest the tea for two hours in twelve litres of boiling water, then add the alcohol, digest, distill, and rectify, as directed above.
Product, 50 litres of perfumed spirit.

* Pekao, or Pekoe, is the name applied to a highly flavored tea which is used for flavoring other teas.

AROMATIC TINCTURES.

The essence of coffee and the essence of tea should be distilled very slowly, and, if necessary, returned upon the solid matters, and redistilled or cohobated.

CHAPTER XXIII.

AROMATIC TINCTURES.

Aromatic tinctures are prepared by saturating spirits with odorous principles without the use of the still, by digestion or maceration, with or without the aid of heat. We should employ for their preparation well-dried substances, as well as alcohol (85°) free from flavor. The vessels in which tinctures are prepared should be hermetically closed.

Tincture of Ambergris (Tincture d’Ambre).

Ambergris ... ... 32 grammes.
Alcohol, 85° ... ... 2 litres.

Digest fifteen days with a gentle heat (25 or 30 degrees), shaking occasionally, filter, and keep it for use.

Tincture of Benzoin.

Benzoin in tears (powdered) ... ... 250 grammes.
Alcohol, 85° ... ... 2 litres.

As above.

Tincture of Catechu (Tincture de Cachou).

Catechu (terra japonica) ... ... 250 grammes.
Alcohol, 85° ... ... 2 litres.

As above.

Tincture of Musk.

Tonquin musk ... ... 15 grammes.
Alcohol, 85° ... ... 2 litres.

As above.
AROMATIC TINCTURES. 431

Digest for at least fifteen days, shaking occasionally, and filter.

Tincture of Curacao (Infusion de Curacoa).

Rinds of the bitter orange of Curacao 5 kilogs.
Alcohol, 85° 10 litres.

Bruise the orange peel without removing the inner portion.

* The author applies the term tinctures to those preparations in which heat is an adjuvant, while those which are prepared by maceration, at the ordinary temperature, he calls infusions. The distinction cannot be made in English without creating confusion.—Trans.
Tincture of Black Currant Leaves (Infusion de Feuilles de Cassis).

Fresh leaves of the black currant (Ribes nigrum) 5 kilogrammes.
Alcohol, 85° 20 litres.
Digest one month.

Tincture of Black Currants (Infusion de Cassis).

Among the tinctures prepared in the cold way, the tincture of black currants is the most important, on account of the great quantity used by the liquorist, and it should, on that account, attract especial attention.

It is difficult to indicate the precise quantity of currants which ought to be used in preparing this tincture. The quantity is dependent on the quality of the article it is desired to produce, or the character and condition of the fruit.

If, for example, a highly colored tincture is wanted, the process is as follows:

Crush the currants with the feet, or in a mill prepared for the purpose, put them in a cask of medium size (200 or 300 litres) so as to fill it about two-thirds; let it stand for three or four days without disturbing it; then add alcohol (85°) enough to fill the cask; stir the whole thoroughly with a strong spatula once a day, for at least eight days, frequently drawing off the liquid from the bottom of the cask, and pouring it back into the cask. This tincture will not be fit for use in less than six weeks.

Casks of medium size are preferable for this preparation, as having many advantages over the pipes and large hogsheads generally used. In fact, in the latter, the currants being in too large quantity to be stirred up well, become impacted in masses. The liquid most frequently cuts out channels for itself through the body of the marc, or along the walls of the hogshead, without taking up the coloring matter of the fruit. Experience has proved to us that by filling a cask of 600 or 800 litres with currants, the tincture produced is inferior to that prepared as we have advised above.

If, on the contrary, it is desired to have a preparation in which the flavor of the fruit will predominate rather than the color, the crushing and vatting of the currants will be dispensed with. It will be necessary only to introduce the fruit into a cask and cover it with alcohol at 58 degrees.

A colored and perfumed tincture may be prepared by crushing the currants, and only filling the cask half full of the fruit, then allowing it to stand twenty-four hours, and then entirely filling the cask with alcohol at 58 degrees.

The tincture of currants may be recharged several times with fresh alcohol; in this case we use the terms first or virgin infusion, second, third infusion, &c., according to the order of the recharging.

When the first infusion has been made with alcohol at 85°, as that intended for cassis double (ratafia), the second charge should be made with alcohol at 58°; the third with alcohol at 43°; and finally, the fruit should be exhausted with pure water. If, on the other hand, the first charge has been with alcohol at 58°, the second charge should be with alcohol at 49°, and the third with alcohol at 43°, &c.

The exhausted marc of currants should be distilled over the naked fire, to recover the small proportion of alcohol which it may retain. The product will be put with the backings or phlegm resulting from the different distillations.

There is really no positive rule for the manufacture of cassis; all depends on the experience and skill of the operator.

Even by employing with the most scrupulous attention the proportions we have indicated above, it may happen that a liqueur made at one time may be greatly inferior to a liqueur prepared before or afterwards; the condition of the fruit, its ripeness, the influence of temperature, and an infusion prolonged for a greater or less
time, are causes which may lead to marked differences in quality.

If our readers should find themselves in difficulty on account of scarcity of fruit, we should advise them to adopt the following receipt:

**Cassis Ordinaire (100 litres).**

(Proportion of pure alcohol, 21 litres, 25 centilitres, or 25 litres at 85 degrees.)

- Tincture (or infusion), first charge, at 80°, 18 litres.
- Rousillon wine (or from Loire), 7 litres.
- Alcohol, at 85°, 14 litres.
- Decolorized and well clarified raw sugar, 12 kilogrammes.
- Water, a sufficient quantity to make up the measure.

**Cassis Demifin (100 litres).**

(Proportion of pure alcohol, 23 litres, 80 centilitres, or 25 litres at 85 degrees.)

- Infusion, first charge, 23 litres.
- Wine of Loire (or Rousillon), 8 litres.
- Infusion of black cherries, 3 litres.
- Infusion of raspberries, 3 litres.
- Alcohol, 85°, 13 litres.
- Decolorized raw sugar, 25 kilogrammes.
- Water, enough to complete the quantity.

The *cassis fin* and *surfin* being sold at a price which is sufficiently high, we should advise the use of the receipt we have already given.

We would not advise liquorists to use the syrups of starch and glucose in superfine (*surfin*) liqueurs. We have already remarked that they do not add to the quality of liqueurs.

**Tincture of Raspberries (Infusion de Framboises).**

Raspberries (very ripe), 100 kilogrammes.
Alcohol, 85°, 100 litres.

Digest one month before using.
DISTILLATION OF ALCOHOL.

grade; strain with pressure, and add one-tenth of the volume (of the liquid) of spirits of wine at 85°, filter, and put in barrels or bottles.

The use of spirits of wine may be dispensed with, if the fermented juice is properly bottled and wired, and subjected to the process of Appert (heating by steam in a closet); in this case the color will not be so deep nor so fine.

These last infusions are employed by some liquorists to increase the color of certain liqueurs prepared from red fruits, as well as the syrups of red currants, mulberries, &c.

Remarks.—All the preparations described in this chapter, as made by the cold process, may be recharged several times with fresh alcohol, as they may still possess color or perfume. Those made from fruits, the infusion of nuts excepted, deteriorate by becoming old; the color becomes yellowish and the perfume is changed; all the others, however, improve by keeping.

CHAPTER XXIV.

LIQUEURS.

The name liqueur is generally applied to certain alcoholic drinks prepared by distillation, infusion, or some other operation. Liqueurs prepared by distillation have the advantage of yielding a product charged with all the aromatic principle of the perfuming material, and yet deprived of free volatile oil, which causes sharpness in liqueurs and disturbs their transparency.

Liqueurs prepared by infusion, or from the essences, never possess the delicacy of flavor and perfume which distinguish those that are distilled, with the exception, however, of the liqueurs prepared from red fruits by infusion, and designated as ratafias.

All liqueurs without exception consist of alcohol, sugar, water, and a perfume or aroma extracted from various substances, all in proportions which vary according to the quality of the article it is desired to produce.

Their hygienic properties have been and are still the subject of active controversy. Have liqueurs and spirits in general been useful or injurious to mankind? May they not, under certain circumstances, replace other medicines? Are they not, on the contrary, dangerous, and even fatal? Such are the questions which for two hundred years have divided the doctors and the various schools of moralists. It is certainly none of our business to undertake the solution of so serious a question, yet we may be permitted to say that we recognize some truths on both sides.

Without doubt, the immoderate use of spirits, and even liqueurs, is pernicious; it degrades the man and undermines his health. Intemperance, which is contrary to reason, is all the more to be feared when it appears to be the most agreeable; it deranges all the functions of organic life, attacks the stomach and the brain, and leads to an inevitable and premature old age. Like the brute, the drunkard is without consciousness; the generous sentiments of human nature are unknown to him; overcome by drink, he only lives and thinks for and by it, and often madness or spontaneous combustion terminates the existence of a wretch who is unworthy to live.

Nevertheless, it is well settled, and nobody can deny that while the abuse of spirits and liqueurs is pernicious, the moderate use of them may be highly salutary:—

"Pauca non ladunt pecula, multa nocent."

"Who drinks a little, does well; Who drinks too much, does ill."

School of Salernum.

Taken with moderation and at proper times, especially after a meal, liqueurs strengthen the stomach and assist digestion. The action of these liquids is manifested throughout the whole economy, especially in the organs of the circulation, and in the sensitive and intellectual
Impressing the organ of taste by their strength," says Brillat Savarin, "and that of the smell by the perfumed odors that are united in them, liqueurs for the moment constitute the se plus ultra of the pleasure of taste."

Therapeutics, too, receives some aid from spirits and liqueurs; for example, Carmelite water (eau des Carmes), vulnerary waters, the elixir of Garus, &c. In fact, are not liqueurs which are composed of sugar, alcohol, and plants or drugs daily used as remedies—nothing more than medicines in a pleasant form? Are not aniseed, coriander, absinthe, hyssop, lemon, orange, orris, vanilla, cinnamon, and cloves administered every day to the sick? Is not sugar itself a powerful promoter of digestion? And besides, the small quantity of alcohol which enters into the preparation of liqueurs can in no degree be injurious to persons in good health.

The manufacture of liqueurs requires various operations, the objects of which are to arrange and prepare in advance everything required for their composition. The quality and transparency depend as much on the care which is expended on these preliminary operations, as on the selection of the materials employed in the manufacture.

We shall now describe all these operations under the light of an extended practical experience.

**Compounding.**

As has already been said, all liqueurs have for their foundation alcohol, sugar, and water; to which are added one or more aromatic principles.

The quality of the composition depends on the more or less intimate blending of the various substances employed, that each of them may be found in proper proportion.

Two principal rules must be observed in the preparation of liqueurs:—

1. Place the various materials which compose them in such relations as will enable them to combine readily and as promptly and intimately as possible.

2. During the operation, preserve the properties of each substance.

In order to obtain these results, it is indispensable to use spirits, sugar, and aromatic substances of the best quality, and to mix them with discretion. Liqueurs ought, too, to be mellowed (trancher), in order to deprive them of the harshness which results from the manufacture. They are to be colored, sized, and filtered, in order that they may satisfy the eye, the taste, and the nose; and finally, they must be preserved with the greatest care.

**Perfume.**

The talent of the liquorist consists mainly in knowing how to unite the various perfumes of liqueurs properly, so as to have his products always of the same quality.

It is not enough that he has receipts for liqueurs; he must also know how to avail himself of the plants, seeds, roots, &c., which come from every land. In order to vary his productions at will, he should be acquainted with the substances which form agreeable compounds, and which may correct or increase the perfume of a liqueur.

Thus, it is often observed that an aromatic substance, when isolated, is by no means agreeable, but on the addition of some other substance the perfume is developed and rendered more perfect. It is on this principle that a little aniseed and fennel destroy the slight boggy odor which is objectionable in the star anise; ambergris alone is almost without perfume, the least quantity of musk gives it the necessary relief; alone the quince is unpleasant, a little cloves relieves and corrects the odor; the after-taste of cinnamon is also corrected by cloves; vanilla when triturated with sugar is more aromatic than when the latter is omitted; and wormwood (absinthe) itself finds its place in liqueurs, provided the rind of the lemon unites its perfumes to it, so as to cover its bitterness.

The correctness of the principles we have put forth
DISTILLATION OF ALCOHOL gave rise in 1758 to a system which claimed the power of producing as many liqueurs as there are musical airs. M. Le Camus, in his work entitled La Médecine de l’Esprit, had already thought that it would be possible to arrange a music of flavors analogous to the music of sound; the author of La Chimie du Gout et de l’Odorat has developed this idea, and as it may be more useful than would appear at first glance, we will reproduce in a few words the opinion of the author.

"The charm of liqueurs," says he, "depends on the flavors being mixed in harmonious proportions. Flavors consist in the more or less intense vibrations of salts which act on the nerves of taste, just as sounds are produced by vibrations in the air which act on the nerves of hearing; there may be, then, a music for the tongue and the palate, as there is a music for the ear. It is very probable that flavors, in order to excite different sensations in the mind, have, like sonorous bodies, their generating dominant notes—major, minor, grave, acute tones; even intervals, and, in fact, all that may produce concords or discords.

"These flavors are—1. acid, ut; 2. heavy, re; 3. tart, mi; 4. bitter, fa; 5. sweet, sol; 6. harsh, la; 7. pun- gent, si."

"In the music of flavors, the thirds, fifths, and octaves produce the most pleasant concords, precisely as in the music of sound. Mix the acid and sweet which answers to ut . . . sol, 1 . . . 5, lemon, for example, with sugar, and you have a simple, but most charming concord—a major fifth. Mix the acid with the tart or sub-acid, as the juice of the bigarade orange with honey, for example, and you will have a tolerably pleasant flavor analogous to ut, mi 1. 3 . . . , a major third. Mix the sweet with the pungent, and the concord will be less pleasant. To render it more agreeable, raise or lower one or other of the flavors half a tone, answering to the flats and sharps, and you will discover a marked difference, etc.

"The discords are not less similar in either species of music; in the music of sound, the fourth is a disagreeable cacophony; in the music of flavors, the mixture of acid with bitter, of vinegar with wormwood, produces an abominable compound. In a word, I look on a well prepared liqueur as a species of musical air."

The perfumed spirits and waters, volatile oils, aromatic tinctures and infusions, are the various preparations which impart perfume to liqueurs. Care should be taken to have the laboratory sufficiently supplied, in order that various kinds and qualities of liqueurs may be prepared as they are called for. Although we may give receipts with the utmost exactness, it may happen that a liqueur prepared at one time will be inferior to the same liqueur prepared at another, either because the materials which compose it are not found in the same conditions of temperature, of maturity, dryness, or moisture, or from causes which would often be difficult of explanation. Under these circumstances, the liquorist should avoid this inconvenience by adding perfume enough to produce a liqueur which may sustain a comparison with one prepared under favorable circumstances.

Mixing.

This, the most important operation of all those which are required for the manufacture of liqueurs, should be conducted in a vessel capable of being closed hermetically. The case, of which we have already given a description, is ordinarily employed for this purpose. This vessel contains on its interior side a scale which indicates during the mixing the quantities of syrup, water, and spirits which are poured into it, and, by this means, no errors can be made in the proper proportions of these liquids.

The mixture should always be made cold, as heat may evaporate a portion of the aromatics and spirits which it is important to preserve.

It should be observed that sugar dissolved by the aid of heat, that is to say, in the form of a more or less concentrated syrup, is infinitely preferable to that dissolved cold; the latter does not communicate to liqueurs
the softness and obscure flavor which, by covering, as it were, that of the spirit, renders liqueurs more delicate, finer, and more palatable. It is true, that by the simple solution of the sugar in cold water, each of its molecules is rendered fluid; but the fluid in which they float is not uniformly charged, and, moreover, whatever may be the constituent principles of the sugar, they are not separated and expanded as they are in sugar dissolved by heat.

The mixture is made as follows:—

First pour the perfumed spirit into the can; then, according to the liqueur to be prepared, add the spirit without perfume; stir well with a wooden spatula; then pour in the syrup, and agitate again; finally, add the necessary quantity of water, and stir for some minutes to render the mixture as complete as possible. When this operation is completed the coloring is added—care being taken to stir anew.

Rest is favorable to liqueurs, and it is only after two or three days that it can be determined by the taste whether they are sufficiently perfumed and mellow, and whether it is necessary to retouch them to improve them.

**Mellowing. (Tranchage.)**

Like all other spirits, liqueurs by growing old acquire a softness and delicacy which are so much relished by amateurs. As a substitute for the action of time, and to communicate the appearance of the desired age, the operation of mellowing (tranchage) has been invented; the operation is as follows:—

Place the liqueur in a water-bath of sufficient size to be only two-thirds full; fit on the cap, and place the water-bath in the boiler; the latter should contain the quantity of water indicated for distillation; then adjust the goose-neck, and apply a very moderate heat, and as soon as it becomes impossible to bear the hand on the cap at the origin of the goose-neck, the fire in the furnace is quickly extinguished, in order to prevent the spirits from being driven off in vapor; allow it to cool completely before removing the water-bath from the boiler.

The heat, during this operation, produces what is called a digestion; it communicates to the liqueurs, by the more intimate union of the materials, a depth and uniformity of flavor which a philosopher has very correctly called that *quid infinitum (ce je ne sais quoi)*, which renders them more pleasant.

It should be observed that the method we have indicated for perfumed spirits (p. 417) will not answer for liqueurs; as they contain sugar, the union of the materials cannot be effected by cold.

With the assistance of M. Egrot, we have constructed an apparatus for mellowing (Fig. 14), which will be of great utility to those liquorists who do not possess a proper distilling apparatus, and who are sometimes rather hasty in endeavoring to mellow their products, thereby risking the loss of alcohol and perfume.

This apparatus may be constructed of any dimensions, and, we are convinced, will render great service to the trade.

The following is a descriptive sketch of the apparatus, which is exceedingly simple:—

**Apparatus for Mellowing Liqueurs.**

A. Kettle or boiler, which is filled with water up to the height of the moulding.

B. Moulding which serves to support the boiler on its furnace.

CC. Two handles for lifting the boiler.

D. Screw-plug for renewing the water when the water-bath is in place.

E. Water-bath, which contains the liqueur to be mellowed.

FF. Collars to the water-bath: the lower adapted to the collar of the boiler, and is not luted; the upper is adjusted to the collar of the cap; the joint is luted.

GG. Handles of the water-bath.