SEIGNETTE BRANDY.

MARETT COGNAC BRANDY.

Neutral spirit, four gallons; Jamaica rum, four pints; three pints of water to dissolve honey, three pints of the decoction of tea, one quart of alcoholic solution of starch, four pints; oil of wine, half an ounce; acetic ether, one ounce; burnt sugar, five ounces.

POULTNEY BRANDY.

Neutral spirit, four gallons; three pints of water to dissolve honey, three pints; infusion of bitter almonds, half a pint; oil of pears, one ounce; oil of wine, one ounce. Color with eight ounces of burnt sugar, and one ounce of cochineal; then add starch solution, five pints.

SEIGNETTE BRANDY.

Neutral spirit, four gallons; refined sugar, four pounds, dissolved in three pints of water; sulphuric acid, half an ounce; catechu, one ounce; alcoholic solution of starch, four pints; oil of wine, one ounce. Color with four ounces of burnt sugar.

If raisin spirit be substituted for rum, in these recipes, the imitation will be perfect.

The infusion of bitter almonds, alluded to, is
formed by digesting ten ounces of bitter almonds well mashed, bruised, or ground, with five ounces of sweet almonds, for thirty-six hours, in one gallon of the spirit.

The decoction of tea is formed by boiling two ounces of green tea in one gallon of water for one hour. The brandy containing either tea or catechu should not leave any sense of roughness on the palate when drunk.

The alcoholic solution of starch is made by digesting one quart of rice flour, in one and a half gallons of a liquid composed of equal measures of spirit and water. The most convenient vessel for this purpose will be a jug or demijohn. The mixture should be frequently shaken, and after digesting for twenty-four hours decant the clear liquid for use. This gives to the spirit a fine dry taste, and the appearance of age. The flour should be made to a paste before adding it to the spirit.

Wheat flour, when used, often leaves the bran in the form of brown specks through and on the surface of the liquor. This will be remedied by straining.

By some the use of rice flour is preferred, as its use is unattended by any of the above objections.
OLD APPLE BRANDY.

CHERRY BRANDY.

Neutral spirits, four gallons; refined sugar, five pounds; water, to dissolve, one gallon; catechu, one ounce; infusion of bitter almonds, half a pint; cloves, cassia, of each half an ounce; these are to be well bruised before adding; tartaric acid, four ounces, dissolved in a pint of water; honey, one quart, dissolved in a pint of water; four drops oil of wintergreen, dissolved in one ounce of acetic ether, then color with one pint of the tincture of cochineal; burnt sugar, one ounce.

PEACH BRANDY.

Neutral spirits, four gallons; three pints of honey, dissolved in two pints of water; mix infusion of bitter almonds, one pint; sulphuric acid, eighty drops; porter, one pint; tincture of saffron, half a pint; and flavor with oil of pears, one ounce, dissolved in two ounces of alcohol, and acetic ether, half an ounce.

OLD APPLE BRANDY.

Neutral spirit, four gallons; decoction of tea, one pint; alcoholic solution of starch, three quarts; sulphuric acid, half an ounce; this is flavored with the
oil of apples, one ounce, dissolved in alcohol, two ounces; color with four ounces sugar coloring; valeric acid of amylic oxide is the chemical name for apple oil.

WHISKEY.

Irish Whiskey.—Neutral spirits, four gallons; refined sugar, three pounds, in water, four quarts; creasote, four drops; color with four ounces burnt sugar.

SCOTCH WHISKEY.

Neutral spirits, four gallons; alcoholic solution of starch, one gallon; creasote, five drops; cochineal tincture, four wine glasses full; burnt sugar coloring, quarter of a pint.

ORONOKO RYE WHISKEY.

Neutral spirit, four gallons; refined sugar, three and a half pounds; water, to dissolve, three pints; decoction of tea, one pint; burnt sugar, four ounces; oil of pear, half an ounce; dissolved in ounce of alcohol.

TUSCALOOSA WHISKEY.

Neutral spirits, four pints; honey, three pints,
dissolved in water, four pints; solution of starch, five pints; oil of wintergreen, four drops, dissolved in half an ounce of acetic ether: color with four ounces of burnt sugar.

**OLD BOURBON WHISKEY.**

Neutral spirit, four gallons; refined sugar, three pounds, dissolved in water, three quarts; decoction of tea, one pint; three drops of oil of wintergreen, dissolved in one ounce of alcohol; color with tincture of cochineal, two ounces; burnt sugar, three ounces.

**MONONGAHELA WHISKEY.**

Neutral spirit, four gallons; honey, three pints, dissolved in water, one gallon; alcoholic solution of starch, one gallon; rum, half a gallon; nitric ether, half an ounce; this is to be colored to suit fancy.

Some consumers prefer this whiskey transparent, while others like it just perceptibly tinged with brown; while others, again, want it rather deep, and partaking of red. The novice will find sufficient examples in "Coloring" to guide his fancy.
OLD RYE WHISKEY.

Neutral spirit, four gallons; alcoholic solution of starch, one gallon; decoction of tea, one pint; infusion of almonds, one pint; color with one ounce of the tincture of cochineal, and of burnt sugar, four ounces; flavor with oil of wintergreen, three drops, dissolved in one ounce of alcohol. By some, rye whiskey is colored only of a slight brownish tinge, with burnt sugar alone.

JAMAICA RUM.

Neutral spirit, four gallons; Jamaica rum, one gallon; sulphuric acid, half an ounce; acetic ether, four ounces; burnt sugar coloring, eight ounces.

PINEAPPLE RUM.

Neutral spirit, four gallons; honey, five pints; water, to dissolve, three quarts; Jamaica rum, one gallon; sulphuric acid, one ounce; butyric ether, two ounces; tincture of cochineal, three ounces; burnt sugar, two ounces.

GIN.

Aromatic Schiedam Schnapps.—Neutral spirit, four gallons; water, four pints, to dissolve honey, four
pints; oil of juniper, fifteen drops, dissolved in nitric ether, one ounce.

HOLLAND GIN.

Neutral spirit, four gallons; three pounds of sugar, dissolved in water, two pints; Strasburg turpentine, four drops; oil of juniper, twelve drops; dissolve them both in alcohol, and add one half ounce of spirit of orris root.

The preceding formulas will furnish as pure liquors as those obtained by distillation, and of the proper and natural strength. It will be seen that at the prices these liquors are made, any one desirous of it, can keep a choice selection of staple liquors at comparatively low costs. The neutral spirit is the most valuable constituent. Those who are desirous of manufacturing on a small scale, will find that from a barrel of neutral spirit, a choice lot of liquors can be made.

If any of the preceding liquors should appear to have too great a strength to the palate, they should be lowered by the addition of water.

As no establishment, where liquors are necessary, would be complete without a few choice cordials, a few receipts are offered.
ANISETTE DE BORDEAUX.

Whiskey, two gallons; five pounds refined sugar; water, to dissolve, a gallon and a half; one drachm oil of aniseed, dissolved in one ounce of alcohol, or well rubbed up in dry sugar, and added; if this is for white anisette, fine with half an ounce of powdered alum; if it is for rose or pink anisette, color to suit taste.

Common rectified whiskey will answer in the above formula, or in any other in which a powerful aromatic is found necessary.

CURACOA.

Common whiskey, five gallons; fresh orange peel, four pounds; oil of bitter almonds, one drachm; oil of cassia, one drachm; oil of lemon, two drachms; oil of cinnamon, fifty drops; water, five quarts, to dissolve refined sugar, sixteen pounds; tincture of cochineal, half a pint; burnt sugar, three ounces; allow the above to digest for five days; the whole of the oils should be dissolved in half a glass of alcohol, and mix well.

MARASCHINO.

Proof whiskey, three gallons; six quarts of water,
to dissolve; sugar, twelve pounds; oil of bergamot, and oil of cloves, of each one drachm; oil of cinnamon, five drops; two ounces nutmegs, bruised; one pound of orange peels; three ounces of bitter almonds, bruised; oil of lemon, one drachm; dissolve the oil in alcohol; color with cochineal and burnt sugar.
VI.

ON THE MANUFACTURE

OF

LOW PROOF SPIRIT.

FOR MAKING WHISKEY, BRANDY, GIN, RUM, CHERRY BOUNCE, PEACH BRANDY, AND ALL KINDS OF LIQUORS, AT TWELVE TO TWENTY CENTS PER GALLON, ASSUMING RAW WHISKEY AT TWENTY CENTS PER GALLON.

These liquors, when tested in the usual manner, will present a fine color, a good bead, and an excellent body. The first step in this process is to provide one or more filters. These are to be used in giving a body and bead to the spirit. A whiskey barrel will answer. It should be provided with a perforated false bottom, firmly secured about twelve inches above the bottom of the barrel, and it should be, packed in the same manner as the stands or filters (for which, see under its appropriate head).
MANUFACTURE OF LOW PROOF SPIRIT.

The first layer should be of sand three inches in depth, and the second composed of rice flour and oatmeal in equal proportions, with a small portion of rice mixed throughout the mass to allow a free passage to the liquid, which should be filtered with rapidity. Some operators use rice flour, with one third of wheat flour, and pack the barrel alternately with this mixture and straw. The straw prevents the agglutination of the mass. In no instance should the mass exceed twelve inches in depth. The barrel should be so adjusted with a faucet fixed in the bottom that barrels could be filled; that is, the liquid should pass from the discharging barrel through the filtering barrel to a barrel ready for its reception at the faucet of the filtering barrel. Spirit filtered in this manner may appear at times heavy in color. This will be removed by allowing it to rest for a few days; if it is required for immediate use, apply finings. The operator will recollect to renew the charges of meal or flour when they should become exhausted, or the sand when it becomes too highly charged with foreign matter, by washing it in clean water. Burnt sugar and tincture of red sanders are the only colors necessary. For their preparation, the reader is referred to the chapter on coloring. The pellitory and Guinea pepper will furnish the artificial strength necessary. For their properties
and preparations, see chapter on "Pellitory and Pepper."

PREPARATION OF LOW PROOF LIQUORS.

RECTIFIED WHISKEY.

Take of raw whiskey, twenty gallons; water, twenty gallons; tincture of Guinea pepper, one and a half gallons; tincture of pellitory, one pint; strong decoction of Samqua tea, three quarts; put on a bead of oil and acid (see Beading Mixture); and add one and a half pints of sugar coloring, and a tumbler or glass full of tincture of red sanders, which gives a slight reddish tinge to the fluid, which makes it very desirable, and causes it to sample well; and is a great improvement on the old style of coloring. This spirit is sometimes prepared without the filtering process, though if the mixture had been filtered, it would have greatly improved its general qualities.

All liquors made according to this plan should be filtered before the stimulants, coloring, &c., are added.

NEW YORK BRANDY.

Filtered whiskey, twenty gallons; clear water, seventeen gallons; tincture of Guinea pepper, one
and a half gallons; tincture of pellitory, one pint; strong decoction of tea, one gallon; if required, add a bead. Color with burnt sugar and sanders, viz. a quart of good bodyed sugar coloring, and one pint of tincture of red sanders; and add four ounces of nitric ether, and half a gallon of tincture of prunes. (See directions for making this tincture under the head of Ethers.)

COGNAC BRANDY.

Filtered whiskey, twenty-five gallons; clear water, fourteen gallons; tincture of pepper, one gallon; decoction of strong tea, one and a half gallons; add six drops of oil of orange dissolved in a wine glass full of alcohol; acetic ether, one pound. Color with burnt sugar, and sanders to suit taste.

NEW YORK GIN.

Perfectly clear filtered whiskey, twenty-five gallons; clear water, ten gallons; clear tincture of grains of paradise of double strength, one gallon; one drachm of oil of juniper dissolved in a gill of alcohol. Sometimes a small portion of turpentine is added; that is, when the grain oil is perceptible to the smell. If finings should be necessary, use alum. (For full directions, look under the head of Finings.)
PIÑEAPPLE BRANDY,

*Same as New York Brandy.*—Manufacturers in all large cities have different brands for the same article. These local names will not be noticed only where the recipe presents some feature in its composition that would be available.

PEACH BRANDY.

Filtered whiskey, twenty-five gallons; water, ten gallons; grains of paradise, one gallon; tea, one gallon; color with burnt sugar, one quart; add acetic ether, twelve ounces; one wine-glassful of water of ammonia.

CHERRY BOUNCE.

Clarified sugar, twenty-five pounds; whiskey, twenty gallons; water, thirty gallons. The sugar to be dissolved in the water. Of the oil of cloves, oil of cassia, and oil of almonds, dissolve one hundred drops of each in a wine glass of alcohol; color a deep, beautiful red with the tincture of red sanders. To the above add two gallons of tincture of grains of paradise.

RUM.

This is prepared from neutral spirit. The spirit
IMITATIONS OF FRENCH BRANDIES, &c. 137

is let down to any proof with water, and an artificial strength given with grains of paradise, and five to ten gallons of Jamaica rum added to every forty gallons; and when desired, colored with burnt sugar.

IMITATIONS OF FRENCH BRANDIES, AS PRACTISED IN FRANCE.

COGNAC BRANDY.

Clean spirit, containing fifty per cent. of alcohol, one hundred gallons; seven gallons of honey dissolved in three gallons of water, having first bruised one and a half ounces of cochineal, and allowed it to macerate in the water for a few days. If the honey is slow in dissolusion, assist it by heat; then add first, working it to a thin paste, eight ounces of catechu; then add five gallons of rum (Jamaica is preferable); twelve ounces of acetic ether; then add good, clean, burnt sugar, and bring the color to suit fancy, or the particular market intended for.

It is a fact, though not generally known outside of the trade, that the "unsophisticated barbarians" prefer all high or strongly colored spirits, under the impression that the coloring indicates its true strength. Thus, coffee-colored brandy to them is the highest proof brandy that is distilled; whereas, a pale light-colored brandy is supposed to have a
mean origin, or rather it is indebted to a barrel of whiskey for its existence; and, on the other hand, persons of intelligence reject high colored liquors, as the excess of coloring favors the notion that the spirit is an imitation. And thus between the two extremes of ignorance, the operator will be guided by a sense of common discretion. Under the present improved mode of manufacturing spirits, burnt sugar alone is unsuited for brandy. As all good imitations are not of a brown color, rather of a purplish brown, made by the addition of red; for this, use cochineal for the finest, and tincture of sanders wood for the common (see directions for preparing this tincture); for the third, use red beets. The two last are used in domestic brandies.

OTARD BRANDY.

Clean spirit, one hundred gallons; honey, six gallons, dissolved in two of water; catechu, five ounces; Jamaica rum, seven gallons; acetic ether, five ounces; half a glass of spirit of orange peel (see directions for making these spirituous essences); and four ounces of spirits of orris root. Color this pale by the addition of one and a half pints of sugar coloring, and half a pint of tincture of cochineal. See directions for preparing all of the tinctures for
coloring and flavoring that are mentioned in these formulas in another part of this work.

SARZERAC BRANDY.

Clean spirit, one hundred gallons; honey, nine gallons, dissolved in four of water; catechu, four ounces; decoction of strong tea, three gallons (this is made by boiling three gallons of water with three pounds of Samqua tea, for two hours); raisin spirit, five gallons; sulphuric acid, one and a half ounces. Color this any desired shade with cochineal and burnt sugar. Sarzerac, Marett, and Poulney brandies contain about fifty-two to fifty-five per cent. of alcohol; and a spirit containing this per centage of alcohol should be used in their manufacture.

MARETT COGNAC.

Clean spirit of fifty-five per cent., one hundred gallons; add five gallons of honey, dissolved in two gallons of water; catechu, eight ounces; one grain of ambergris dissolved in an ounce of warm alcohol; two gallons of the infusion of bitter almonds. This infusion is made by digesting two pounds of bruised bitter almonds in two gallons of the spirit for a week. Rum, four gallons; raisin spirit, five gallons. Color to suit fancy.
POULTNEY BRANDY.

Clean spirit of fifty-five per cent. of alcohol, one hundred gallons; honey, nine gallons, dissolved in three of water; infusion of bitter almonds, two gallons; two grains of ambergris dissolved in alcohol; sulphuric acid, half an ounce; catechu, nine ounces; rum, five gallons; acetic ether, six ounces; raisin spirit, four gallons. Color same as the last.

SEIGNETTE BRANDY.

Clean spirit of fifty per cent., one hundred gallons; add sugar, forty pounds, dissolved in three gallons of water; three gallons of honey, dissolved in two of water; six ounces of catechu, one-half ounce of sulphuric acid, two gallons of the spirit of prunes (see directions for making this spirit), nine ounces of acetic ether; of the infusion of sweet almonds, two gallons; this is made in the same manner; infusion of bitter almonds. Color with cochineal and burnt sugar.

The rum, acetic ether, raisin spirit, and prune spirit, that are prescribed in the preceding formulas, are added for the vinous flavor that they yield, being a good imitation of the heavy oil of wine, for which pure brandy is indebted for its flavor or aroma. The
acid gives a vinous taste, the almonds give a nutty flavor, the sugar or honey gives a fine body and luscious taste, the ambergris, in combination, gives an odor that is much admired by good judges of brandy.

The cheapest modes, however, of making these brandies, and to save a large portion of sugar or honey, is to pass the clean spirit through a bed of starch, &c. See Directions. Liquors containing starch, need but a small portion of sugar.

The operator has an extensive range of aromatics to select from as substitutes for oil of wine. Among the most prominent, may be found butyric ether, which possesses a strong odor of pineapples, prune spirit, raisin spirit, acetic ether, rum, a combination of orange, orris, and ambergris perfumes, nitric and chloric ethers, and an extensive assortment of perfumes.

AROMATIC SCHIEDAM SCHNAPPS.

This is one variety of gin that is obtained by the distillation of juniper berries with spirit free from grain oil. The imitation of this article, is prepared as follows—in quantities of five gallons:

No. 1.—Take of neutral spirit, five gallons; honey, four pints; orange flower water, two pints; English oil of juniper, thirty drops. Dissolve the honey in
the orange flower water, and the oil in two ounces of hot alcohol, then add, and shake up well; then add, finely powdered, four drachms each of alum and dried potash, for finings. Allow it to stand for twenty-four hours, and then bottle.

No. 2.—Neutral spirit, five gallons; orange flower water, one pint; English oil of juniper, forty drops; honey, five pints; nitric ether, one ounce; Dissolve the honey in three pints of clear water, and the oil of juniper in the nitric ether, and mix the whole well together, and if it is not perfectly transparent, fine with alum and potash, as above. If the honey is warmed and strained, the finings can be dispensed with, which would be desirable.

No. 3.—Neutral spirit, five gallons; honey, three pints; water, two pints; orange flower water, one pint; oil of juniper, thirty-five drops; acetic acid, two ounces. Dissolve the honey in the water, and the oil in six ounces of alcohol; add the acid first and then the orange flower water, and agitate well, then add the honey and oil of juniper.

The neutral spirit contemplated in these receipts, should be entirely free of all impurities, such as grain oil or any acrimonious substances, or when it is drunk, there should be no roughness, acridness, or bitter.
ness, left in the throat or about the roots of the tongue; the spirit should be perfectly limpid—clear—transparent; and the honey should be as near transparent as possible, rendered so by warming and straining. The warming renders the honey so perfectly fluid, that it can be strained through fine muslin.

The objection to the use of the potash and alum, as fining, are that the potash is liable to attach to oil of juniper and saponify it, and also it leaves, in some instances, where the spirit is low proof, a somewhat disagreeable taste. This must be obvious, as the alum and potash combine with the water in the spirit.

No. 4.—Neutral spirit, five gallons; refined sugar, four pounds; water, two pints; spirit of nutmegs, two pints; rose water, one pint; English oil of juniper, forty drops. Dissolve the sugar in the water, and add the two pints of spirit of nutmegs; this spirit is formed by digesting four ounces of bruised nutmegs in two pints of clear spirit for four days, and straining.—Dissolve the juniper oil in two ounces of alcohol, then mix by agitation.

The spirit used for making this gin, should contain about fifty to fifty-two per cent. of alcohol.
MANUFACTURE OF LOW PROOF SPIRIT.

No. 5.—Neutral spirit, five gallons; honey, four pints; water, three pints; orange flower water, one pint; rose water, one-half pint; oil of juniper, fifty drops; alcohol, two ounces. Dissolve the honey in the water, and the oil of juniper in the alcohol, and then mix the whole well together.

When this gin is prepared on an extensive scale, the starch filtration, for giving a body to the spirit, can be resorted to, which will economize an immense quantity of honey or sugar.

FOR THE CONVERSION OF COMMON GIN INTO SCHIEDAM SCHNAPPS.

1. Common gin, five gallons; strained honey, four pints; sulphuric acid, two drachms; spirit of nutmegs, one pint; spirit of nitric ether, one ounce; clear water, three pints. Mix the honey and water, and add to the gin the sulphuric acid.—The spirit of nutmegs is formed by digesting three ounces of bruised nutmegs in a pint of the gin for five days, then strain and add with the ether.

2. Common gin, thirty gallons; strained honey, four and a half gallons; clear water, two gallons; sulphuric acid, one ounce; sweet spirits of nitre, eight ounces; spirit of nitric ether, three ounces; acetic ether, two ounces; oil of wintergreen, ten drops,
dissolved in the acetic ether. Dissolve the honey in the water, and then add all of the articles to the spirit. If this should appear somewhat cloudy or heavy in color, fine with two ounces each of alum and potash, dried by the heat of the fire sufficiently to admit of being finely powdered.

The above is really a fine gin, and cheaply made, of a fine body and luscious taste. The gin used should be free from all disagreeable tastes.
A bead is composed of one or more small white globules, found floating on the surface of any liquid that has been subject to agitation, and is supposed to denote the strength of liquors; for instance, if a portion of spirit be subjected to a brisk agitation for a moment in a tumbler, or proof glass, and the bubbles continue on the surface for a few minutes, it is called proof spirit; but if, on a discontinuance of the agitation, the bubbles disappear, the spirit is said to be below proof.

A bead can be given to spirits from three sources; first, from alcohol, which may be known from the globules being of the size of a duck shot; the second source is from filtering the liquid through any sub-
stances that may contain mucilage, or starch. This bead may be known from its magnitude, being twice and thrice that of the alcoholic bead, and also their great tenacity, by continuing for some time after the agitation has ceased; and when the exciting substance, viz. mucilage or starch, is added to excess, the surface of the spirit will be covered with these globules.

The distinguishing feature of this bead is the great magnitude of its globules, which greatly exceed any others.

The bead derived from the third source is a chemical compound, resulting from the combination of sweet oil and oil of vitriol; say by mixing drop by drop, twenty drops sulphuric acid, with thirty drops sweet oil; this quantity is used to give a bead to ten gallons of spirit. This quantity, in some instances, may not suffice, as the spirit may contain some incompatibles; in this case the mixture may be added until the proper bead can be seen by agitation. This bead may be distinguished by the globules bearing a strong resemblance to the frothy productions of soap: they are small, frothy, and white, lying compact, or closely knit together, on the surface of the liquid.

The above beading mixture should only be prepared when required, as it does not improve by age. To prevent a failure in the above preparation, owing
to adulterated sweet oil being used, which has become so plentiful in market, any oil that will stand the following test, will answer: mix equal portions of nitric acid and sweet oil; if the margins of this mixture should become a yellowish or yellowish green color, the oil is pure.

Alum, alkalies, and acids, in solution, are all incompatible with the beading mixture.

GUINEA PEPPER, PELLITORY, &C.,

Are used in the manufacture of the cheaper kinds of liquors, wines, cordials, and vinegar; the object of their use is to supplant the place of alcohol, to produce the stimulating, burning, and biting effects of the alcohol on the palate. For example, a given quantity of water may be charged with a proportional quantity of the tincture and solution of pepper, pellitory, sulphuric acid, a very small quantity of alcohol, wheat flour, or mucilage of slippery elm and burnt sugar, and sanders wood coloring, and you will have an article of spirit that will compare favorably with any of the domestic liquors of the day, at a cost truly astonishing. The articles above enumerated cost comparatively nothing. The pepper is preferable to spirits of nitre for producing a false strength for liquors, as it is not destructive to
health; and pecuniarily, it is more economical. Liquor, adulterated as above mentioned, after having been swallowed, leaves a dull, heavy, slightly stinging, acrid sensation in the throat and palate, which continues for a few moments. This sensation is rarely, if ever, noticed, as it is regarded as one of the peculiarities of all alcoholic drinks; and as an evidence of this, thousands of gallons of the above article are consumed annually, under the name of domestic brandy, &c. And, while on this subject, I would remark, that any liquor should be rejected that leaves the slightest tingling sensation in the throat.

*Description and Preparation of Pepper, known under the Names of Grains of Paradise.*—Guinea pepper, and Melegueta pepper, are kept in the shops; small seeds, of a round or ovate form, often angular, minutely rough, brown externally, white within, of a feebly aromatic odor when rubbed between the fingers, and of a strong, hot, and peppery taste. They are brought from Guinea; their effects on the system are analogous to those of pepper.

Guinea pepper is prepared for use by grinding, or pulverizing to a powder, one to one and a half pounds of the powder to a gallon of proof spirit, and used for giving false strength to liquor, in the
proportion of from one to two quarts, to forty gallons; this tincture should be well strained, to prevent muddiness in the barrel, after the pepper has been added.

Description and Preparation of Pellitory.—Pellitory, the dried root, is about the size of the little finger, cylindrical, straight, or but slightly curved, wrinkled longitudinally, of an ash brown color externally, whitish within, hard and brittle, and sometimes furnished with a few radicles, and destitute of odor, though when fresh, of a disagreeable smell; its taste is peculiar, slight at first, but afterwards acidulous, saline, and acrid, attended with a burning and tingling sensation over the whole mouth and throat, which continues for some time, and excites a copious flow of saliva; of the two substances just mentioned, viz. pepper and pellitory, preference must be given to the pepper in all instances, although they could be used to a decided advantage in combination for the coarser liquors, as common whiskey and brandy; the pellitory is too powerful, and not at all adapted to the nature of fine or light liquors, as the acrimony would partially destroy the flavor of the liquors.

The burning sensation produced by pepper and alcohol is nearly identical; and it must be obvious that the former will answer all the purposes of the lat-
ter, with the exception of not furnishing the intoxicating quality, which must be added in the form of alcohol.

In the manufacture of all the cheap light wines, cordials, &c., where alcohol would be an important consideration, pecuniarily, Guinea pepper will answer admirably. Although, I would not recommend this, or any other foreign substances, for producing a false strength in liquors, where it was intended for a pure article; the alcohol, if added in a sufficient volume, will answer all purposes. The manufacturer should not lose sight of the fact, that the powerfully biting and burning sensation that is found in some liquors, is not the slightest evidence of its purity. Mildness of taste is one of the characteristics of a good liquor, and the successful operator should copy nature as closely as possible.

**For increasing the volume of whiskey, &c., from twenty to forty per cent., without loss of strength.**

This whiskey will not stand the test of the hydrometer.

For increasing liquor as above, take from the barrel the per centage of liquor desired, and add a corresponding per centage of clean clear water, charged
with a tincture of Guinea pepper (see Formula), and then put on a good bead (see Formula for Bead Bearing). The quantity of pepper can be varied in the above formula, and if the operator desires that the spirit in question should have greater strength (to the taste) than it had previous to the adulteration, it can be obtained by increasing the quantity of pepper, and by the addition of three to four ounces pellitory, well washed, or bruised, to the gallon tincture of pepper.

As the pepper is liable to vary in strength, from age, and unripe seed, and a variety of unexplained causes, the operator will have to depend more upon the judgment of his palate, as to the quantity necessary for any given amount of spirit, and also as to the quantity forming the tincture. For particulars, see Formulas.

CLARIFYING WINES AND LIQUORS; WITH A DESCRIPTION AND PARTIAL ANALYSIS OF THE PROPERTIES AND ACTION OF THE ARTICLES USED.

The object of clarification is transparency. This all-important branch of this business is effected in various ways; first, by filtration through charcoal, sand, &c.; secondly, by the use of finings, such as eggs, isinglass, wheat flour, milk, alum, &c.; thirdly