

PRACTICAL EXPERIENCE

IN THE

WINE AND LIQUOR BUSINESS,

PUBLISHED AS MANUSCRIPT

BY

Edward Flora, C. C.

SAN FRANCISCO,
1867.

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Leopold, A. Justi

Glen Allen

Sonoma,

Co.

Cal.

Only now it is possible for me, to redeem my word to my dear and respected patrons and friends, to publish a small book about the Wine and Liquor Business.

The cause of this delay is an extended trip through all the principal Wine Countries of California, and especially my stay at Tule River near Visalia, lasting over two months, during which time I had an opportunity to make several experiments in the Wine as well as in the Liquor Business.

I have made this book as small as possible, but I flatter myself, that everybody will find therein all that is required. All my specifications and receipts have their foundation on my own personal experiments and trials, and not a single one is copied from any other book.

Already in my fourteenth year of age I learned the Wine and Liquor Business thoroughly in Italy and since that time (16 years) I have always strived to perfect myself in it.

About the fabrication of wine I have but few remarks, believing the gentlemen wine growers have had practice enough themselves. Other means and remedies I believe to have given enough, to satisfy everybody.

About Destillation, Rectification, etc., is certainly said enough, also about the Fabrication of Liquors from Spirit.

Finally I entreat my much respected friends and patrons, to read all of this little book, before they give their verdict about it, and then to be as lenient as possible.

Most respectfully

Your

EDWARD FLORA, C. C.



Spirit.

All spirit used for the manufacture of liquors must be cleaned or rectified and all receipts following in this work are calculated to contain spirit of 90 to 95 per cent, so that if any one wishes to use spirit of any other degrees, he will have to make his calculations accordingly; to give any certain rule for it is not necessary.

Before using any spirit it will be best to try it first by mixing $\frac{1}{2}$ spirit with $\frac{2}{3}$ water; if this reduced liquid is white and clear, the spirit is good, if it is getting a bluish hue, it is not good and must be rectified before using, which is easily done in the following simple way:

Rectification or Clearing of Spirit.

In a fourty gallon barrel insert a false bottom transfixd with holes, about four inches above the real one, cover the same by a piece of flannel and above it put the following ingredients:

- 1—10 lb of bones, burnt white and crushed,
- 2— 1 lb of german magnesia,
- 3— $\frac{1}{2}$ lb of common salt,
- 4— $\frac{1}{2}$ lb of common potash,

all mixed and covered by another piece of flannel; spread 15 lb of sand, washed very clean, on top and cover again by a piece of flannel.

The foregoing is calculated to rectify 100 gallons of spirit; after running through that quantity the ingredients have to be renewed.

The faucet ought to be placed immediately on the real bottom, to enable the spirit to run out easy without shaking or moving the barrel.

The first 3 or 4 gallons running out of the rectifier are generally not very clear and ought to be put back again.

To save the strength of the spirit as much as possible, cover the rectifier after filling by a heavy woolen blanket.

ATER prepared for the first division of liquors :

Take 30 gallons of clear, cold water,
10 “ “ water warmed to 115° Fahrenheit,
1 lb crushed gum arabic,
1 lb white oak bark (ground),
¼ lb slippery elm (do.)

Mix it all up, allow it to stand for 24 hours and use only the clear part of it.

All liquors prepared with the above water do not need to be filtered.

Any “P” standing after “water” signifies prepared water throughout this work.

Brandy ord. American.

20 gallons spirit,
1 ounce spirit nitric,
¼ “ oil of wintergruen,
1 “ acetic ether,
2 “ common salt.
20 gallons of water P.

The color is made not too dark from burned sugar. See : “Caramel an colors for liquors.” (Saleable within three days after fabrication.)

California Brandy, made of grapes.

20 gallons of spirit,
2 ounces of spirit nitric,
2 “ laurel water,
1 “ acetic ether,
2 “ butirie ether,
¼ “ oil of cognac.
5 drops oil of cinnamon,
5 “ “ “ cloves,
10 “ extract of vanille,
2 ounces of common salt,
20 gallons of water P.

Color the same as the last.

French Cognac No. 1.

20 gallons of spirit,
1 ounce spirit nitric,
2 “ laurel water,
1 “ acetic ether,
2 “ butiric ether,
1 “ oil of cognac,
5 drops oil of cinnamon,
5 “ oil of cloves,
10 “ extract of vanille,
2 ounces of common salt,
20 gallons of water-P.

Color pretty dark with Caramel.

French Cognac No. 2.

20 gallons of spirit,
20 “ “ water P.
2 lb of crushed white sugar,
2 ounces of terra japonica,
1 “ “ butyric ether,
1 “ “ spirit nitric,
 $\frac{1}{2}$ “ “ oil of cognac.

Color as the last.

French Cognac No. 3.

20 gallons of spirit,
20 “ “ water P,
2 lb of crushed white sugar,
1 ounce acetic ether,
 $\frac{1}{4}$ “ oil of cognac,

Boil in one gallon of water :

$\frac{1}{2}$ ounce of saffron,
4 “ “ black tea,

and mix it all together.

Color as the last.

Whisky ord.

- 20 gallons of spirit,
- 20 “ “ water P,
- $\frac{1}{2}$ ounce oil of cinnamon,
- $\frac{1}{4}$ “ “ “ cloves,
- 1 “ spirit nitric.

Color very lightly with caramel.

Whisky, old Bourbon,

- 20 gallons of water P;
- 20 “ “ spirit,
- 4 lb barley roasted like coffee,
- $\frac{3}{4}$ ounce oil of cinnamon,
- $\frac{1}{2}$ “ “ “ cloves,
- $\frac{1}{2}$ “ “ “ bergamot,
- 1 “ “ “ bourbon,
- 1 “ spirit nitric,
- 2 “ gum arabic.

Color the same as the last.

Rye Whisky.

- 20 gallons of spirit,
- 20 “ “ water P,
- $\frac{1}{4}$ ounce oil of wintergruen,
- $\frac{1}{2}$ “ “ “ cinnamon,
- $\frac{1}{4}$ “ “ “ cloves,
- 4 lb rye roasted like coffee.

Color the same as last.

Korn Whisky.

- 20 gallons of spirit,
- 20 “ “ water P,
- 4 lb of Indian Corn boiled soft in one gallon of water and mashed,
- $\frac{1}{4}$ ounce extract of vanille,
- 3 gallons of good old whisky.

Color the same as last.

Preparation of water for the 2d division of Liquors.

Take 20 gallons of clear, cold water,
5 “ “ water warmed to 115° Fahrenheit,
1 lb gum arabic,
5 lb white sugar;

mix and use the same as mentioned in the first division.

Gin ord.

10 gallons of spirit,
 $\frac{1}{2}$ ounce of oil of juniper,
 $\frac{1}{4}$ “ “ “ “ cinnamon,
 $\frac{1}{8}$ “ “ “ “ cloves,
3 “ “ gum arabic,
10 gallons of water P.

No color.

Holland Gin, fine.

10 gallons of spirit,
 $\frac{1}{2}$ ounce of oil of juniper,
 $\frac{1}{4}$ “ “ “ “ cinnamon,
 $\frac{1}{8}$ “ “ “ “ cloves,
3 “ “ gum arabic,
10 gallons of water P.

No color.

Old Tom.

10 gallons of spirit,
 $\frac{1}{4}$ ounce of oil of juniper,
 $\frac{1}{3}$ “ “ “ “ bergamot,
 $\frac{1}{4}$ “ “ “ “ cloves,
 $\frac{1}{4}$ “ “ “ “ cinnamon,
10 drops of oil of roses,
3 ounces gum arabic,
10 gallons of water P.

No color.

Anisado.

10 gallons of spirit,
1 ounce oil of anise,
20 drops oil of cinnamon,
10 " " " cloves,
12 gallons of water P,
3 lb white sugar.

Anisado is here generally white, but in Germany colored yellow.

Kuemmel.

10 gallons of spirit,
1 ounce oil of kuemmel, (caraway),
20 drops extract of vanille,
14 gallons of water P,
3 lb white sugar,
4 ounces gum arabic.

No color.

Apple Brandy.

10 gallons of spirit,
1 ounce laurel water,
3 lb well dried and strong roasted apples,
10 gallons of water P.

Peach Brandy.

10 gallons of spirit,
 $\frac{1}{2}$ ounce of oil of bitter almonds,
4 lb well dried and strong roasted peaches,
12 gallons of water P,
2 ounces gum arabic.

No color.

Kirsch-Wasser.

10 gallons of spirit,
1 ounce of oil of bitter almonds,
 $\frac{1}{4}$ " extract of vanille,
3 " gum arabic,
10 gallons of water P.

No color.

Enzian Brandy.

10 gallons of spirit,
4 ounces radix genziana (cut in small pieces,)
3 “ gum arabic,
10 gallons of water P.

Zwetschgenwasser, or Slivowitz.

10 gallons of water P,
10 “ “ spirit,
2 lb of Zwetschgen well dried and punded fine,
1 ounce of laurel water,
 $\frac{1}{2}$ “ “ oil of bitter almonds.

Colored lightly with caramel.

All natural substances, as barley or rye in whisky, apples, peaches, genzian, zwetschgen, &c., &c., in their respective brandies ought to be kept at least from one to two weeks in the barrel, before using the liquor.

Sugar Water for the 3d Division of Liquors

20 gallons cold clear water,
5 “ water warmed to 115° Fahrenheit,
20 lb white and clean sugar,
 $\frac{1}{2}$ lb gum arabic,

mix and use the same as mentioned in the first division.

H. Bitters.

5 gallons of spirit,
7 “ “ sugar water,

Boil in one gallon of water $\frac{1}{4}$ of an hour:

1 ounce calmus roots,
2 “ liquorice wood,
1 “ sasafra,
 $\frac{1}{4}$ “ aloe,
4 “ coriander,
3 “ cinnamon,
3 “ cloves,
 $\frac{1}{2}$ “ vanille,
1 “ orange peel;

filter it well and mix with the above. Color as agreeable with caramel.

D. Bitters.

5 gallons of spirit,
 $\frac{1}{4}$ ounce oil of juniper,
6 gallons of sugar water P.

Boil in one gallon of water $\frac{1}{4}$ of an hour:

1 ounce quassia,
1 " calmus,
1 " sasafra,as,
1 " wermuth,
 $\frac{1}{2}$ " absynthe,
2 " cinnamon,
1 " cloves ;

filter well with the above 11 gallons and color pretty brown.

Italian Bitters.

5 gallons of spirit,
 $\frac{1}{8}$ ounce oil of cinnamon,
 $\frac{1}{8}$ " " " cloves,
 $\frac{1}{8}$ " " " orange,
6 gallons of sugar water P.

Boil in one gallon of water $\frac{1}{4}$ of an hour:

1 ounce radix Genziana,
1 " calmus,
1 " bark of sasafra,as,

filter and mix with the above.

Color strong orange yellow with caramel.

N. B. This kind of bitters I used to manufacture here in San Francisco and sold a great quantity of it, a fact I am able to prove with most of the principal saloon keepers in the city.

St. Bitters.

ESPECIALLY FOR COCKTAILS.

5 gallons of spirit,
7 " " sugar water P,
4 " gum arabic.

Boil in one gallon of water $\frac{1}{2}$ of one hour :

4 ounces of orange peel,
1 " " calmus,
1 " " radix genziana,
 $\frac{1}{2}$ lb red-saunders,
4 ounces of cinnamon,
3 " " cloves,
1 " " quassia ;

filter and mix with the above. Color very dark with caramel.

Brandy Bitters.

10 gallons California brandy at 50 per cent,
4 “ “ sugar water P,
 $\frac{1}{4}$ ounce oil of bergamot,
 $\frac{1}{4}$ extract of vanilla.

Boil in half a gallon of water for $\frac{1}{4}$ of an hour :

3 ounces of orange peel,
1 “ “ calmus,
 $\frac{1}{4}$ “ aloe,

filter, mix with the above and color with caramel.

Wine Bitters.

20 gallons of California white wine (well fermented)
5 gallons of alcohol 90 to 95°.

Boil in one gallon of water $\frac{1}{4}$ of an hour :

1 lb orange peel,
 $\frac{1}{4}$ lb lemon peel,
2 ounces of calmus,
1 “ “ saffras,
1 “ “ Rhubarb,

filter mix and color slightly with caramel.

Wermuth.

10 gallons of red wine (well fermented),
5 “ “ “ sugar water P,
4 “ “ “ spirit.

Boil in one gallon of water $\frac{1}{4}$ of an hour :

2 ounces wermuth,
3 “ Peruvian bark,
1 “ rhubarb,
1 “ peppermint leaves,
3 “ saffras,

filter and mix with the above.

There are a great many other bitters, beside those named here, but these are the best ; all others depend on the same principle and are very easily made. Many bitters manufactured here and praised up as tonics,

etc., are not worth the labels on the bottles, therefore, I will not enumerate any more.

The reason, that I named several bitters only by the first letter, is, that certain gentlemen, which claim them as their own, cannot get any hold on me.

Professor Liebig in Munich (Bavaria) acknowledges the Italian Bitters (the receipt of which I gave) as the best in the world; other eminent men are of a different opinion, so let everybody have his way and select that which suits him best.

To make these from wine manufactured liquors very clear and to beautify them greatly, use the same treatment as with wine (see: Clarification of wine.

Hunter's Cordial.

(Jagd-Trank.)

5 gallons of spirit,
5 " " sugar water P,
½ ounce oil of peppermint,
¼ " " " anesi,
¼ " " " lemon,

Boil in a gallon of water:

3 ounces of coriander,
1 " " calmus,
2 " " absynthe,
2 " " wermuth,

filter, mix and color slightly brown.

Weichselgeist.

5 gallons of spirit,
½ ounces of oil of bitter almonds,
3 ounces juice of alcermes,
1 gallon fine syrup,
6 " sugar water P,

filter, mix and color slightly red (wine color).

Schweizer Burgomeisterlein.

5 gallons of spirit,
1 ounce oil of anesi,
½ " " " knemmel (caraway).
5 " " " sugar water P.

Boil in one gallon of water, ¼ of one hour:

4 ounces of wermuth (worm wood),

filter and mix. No color.

Anesone di Brescia.

5 gallons of spirit,
1 ounce oil of anesi (anise),
5 drops of cinnamon,
5 lb of white sugar,
5 gallons of sugar water P.

Filter and mix. No color.

Rost Absynthe.

5 gallons of spirit,
 $\frac{1}{2}$ ounce of oil of anise,
5 gallons of sugar water P.

Boil in $\frac{1}{4}$ gallon of water:

1 ounce of herba absinthia,

filter and mix. No color.

Curacao.

5 gallons of spirit,
 $\frac{1}{4}$ ounce oil of orange,
5 drops oil of bitter almonds,
5 “ extract of vanille,
10 lb white sugar,
5 gallons sugarwater P,

filter, mix and color slightly yellow (see: liquor color.)

Sugar Water for the fourth Division of Liquors.

20 gallons of clear cold water,
7 “ water warmed to 115° Fahrenheit,
50 lb of clean white sugar,
1 lb gum arabic,

mix and use the same as for the other divisions.

N. B. The following liquors are called in Italy “Rosoglios” and in France “Cordials.” For all these use the same amount of spirit and sugar water:

5 gallons of spirit 90 to 95°,
7 “ “ sugar water P.

Henceforth I will only give therefore the name and quantity of the different oils and essences belonging to the mixture of each.

Anise.

$\frac{1}{2}$ ounce of oil of anise,
5 drops “ “ “ cinnamon,
3 drops “ “ “ cloves. (Color yellow.)

Cloves.

$\frac{3}{4}$ ounces of oil of cloves,
5 drops of roses. (Color yellow.)

Cinnamon.

$\frac{1}{2}$ ounce of oil of cinnamon. (No color.)

Lemon.

$\frac{1}{2}$ ounce of oil of lemon (Color lemon yellow).

Orange.

$\frac{1}{2}$ ounce of oil of orange (color orange yellow).

Vanille.

$\frac{1}{2}$ ounce extract of vanille (color brown.)

Bergamot.

$\frac{3}{4}$ ounces of bergamot (color light yellow.)

Rose.

20 drops of oil of rose (rose color).

Weichsel.

$\frac{1}{2}$ ounce of oil of bitter almonds.
3 “ of juice of alcerne (color red.)

Bitter Almonds.

$\frac{1}{2}$ ounce of oil of bitter almonds (no color).

Peppermint.

$\frac{1}{2}$ ounce of oil of peppermint (no color).

Calamus.

1 ounce extract of calamus, or

3 ounces of roots of calamus boiled in $\frac{1}{4}$ gallon of water $\frac{1}{4}$ of one hour.
(No color.)

Kuemmel.

$\frac{1}{2}$ ounce oil of Kuemmel (caraway). No color.

Gold Water.

1 ounce oil of orange,
1 “ “ “ bitter almonds,
20 drops of extract of vanille. (No color.)

In every bottle put a gold leaf.

Silver Water.

1 ounce oil of lemon,
1 “ “ “ bergamot. (No color.)

In every bottle put a silver leaf.

Aqua di Bella Donna.

1 ounce of oil of cloves,
1 “ “ “ “ bitter almonds,
5 drops of extract of vanille,
10 “ “ oil of cinnamon,
5 “ “ “ “ peppermint.

Color yellow very slightly.

Late di Vechia.

1 ounce of butyric ether,
1 “ “ oil of cinnamon,
 $\frac{1}{2}$ “ “ “ “ cloves,
 $\frac{1}{8}$ “ “ “ “ orange. (No color.)

Peach

$\frac{1}{2}$ ounce oil of bitter almonds,
5 drops “ “ rose. (No color.)

Raspberry.

5 lb of juice of raspberry,
 $\frac{1}{8}$ ounce oil of cinnamon,
 $\frac{1}{4}$ “ “ “ “ cloves. (Color fine red.)

Cacao.

$\frac{1}{2}$ ounce butter of cacao. (No color.)

Sugar Water for the fifth Division of Liquors.

10 gallons of clear cold water,
10 “ “ water warmed to 115° Fahrenheit,
140 lb of clean white sugar,
2 lb of gum arabic.

Punches.

These kinds of liquors came in vogue lately, especially as a “hot drink” in winter and a “cold drink” with ice in summer.

Since all these drinks are mixed with water, they require to be pretty strong; therefore take for all the following receipts the same amount of spirit and sugar water:

5 gallons of spirit,
4 “ “ “ sugar water P,

and add the different essences and oils as given.

Lemon.

$\frac{1}{2}$ ounce of oil of lemon.

Orange.

$\frac{1}{2}$ ounce oil of orange.

Cinnamon.

$\frac{1}{2}$ ounce of oil of cinnamon.

Cloves.

$\frac{1}{2}$ ounce of oil of cloves.

Rum.

$\frac{1}{2}$ ounce of oil of Jamaica Rum.

Coffee.

Take $\frac{1}{2}$ lb of good coffee beans, make $\frac{1}{2}$ gallon of good strong coffee, and mix.

Chocolate.

$\frac{3}{4}$ ounce of butter of cacao,
20 drops of extract of vanilla,
10 “ “ oil of cinnamon,
10 “ “ “ “ cloves.

All punches ought to be colored very dark with caramel, about the color of rum, because the water they are to be mixed with, reduces the color about one half.

DIFFERENT RECEIPTS.

Jamaica Rum.

5 gallons of spirit,
4 “ “ water, clear and cold,
1 ounce of oil of Jamaica Rum.

Color strong with caramel.

New England Rum.

5 gallons of spirit,
5 “ “ water,
 $\frac{1}{4}$ ounce of butyric ether,
 $\frac{1}{4}$ “ “ spirit nitric. (No color.)

Cherry Ratafiato.

5 gallons of spirit.
20 lb sugar,
20 lb crushed cherries,
 $\frac{1}{4}$ lb cinnamon (whole),
 $\frac{1}{4}$ lb cloves,
5 gallons of water ;

mix well and keep it standing for 8 days ; then filter.

Nuss-Wasser or Walnut-Brandy.

5 gallons of spirit,
10 lb of green walnuts quartered,
 $\frac{1}{4}$ lb of cinnamon,
 $\frac{1}{4}$ lb of cloves,
2 ounces of ground nutmeg.

Keep it standing for 8 days, then filter and reduce with
6 gallons of water, and
20 lb of fine white sugar. (No color.)

WINES.

Port Wine.

10 gallons of red California wine,
10 lb of China sugar,
4 gallons of spirit,
 $\frac{1}{4}$ ounce of oil of cinnamon,
 $\frac{1}{8}$ “ “ “ “ cloves.

Burn 5 lb of white sugar brown and dissolve in 4 gallons of water.
Color red with malva aboria.

Port Wine of Red Wine Must.

Boil 20 gallons of must for 2 hours and mix with

3 gallons of spirit,
 $\frac{1}{2}$ ounce oil of cinnamon,
 $\frac{1}{2}$ “ “ “ cloves,
3 gallons of water.

Clear it like red wine.

French Claret.

50 gallons of claret,
5 “ “ water,
 $\frac{1}{4}$ lb extract of oak bark,
 $\frac{1}{2}$ lb common salt,
20 gallons of water,
4 “ spirit.

Malaga Wine.

10 gallons of red California Wine.
5 “ “ water,
4 “ “ spirit,
10 lb of sugar.

Boil in 1 gallon of water and $\frac{1}{4}$ gallon of caramel:

4 lb of Malaga raisins,
1 ounce of cinnamon,

and mix with the rest.

Muscat Wine, No. 1.

120 to 140 gallons California white wine,
 $\frac{1}{4}$ gallon extract of nutmegs.

To make this extract, take

2 lb of crushed nutmegs,
1 gallon of spirit,

and keep it standing for 14 days.

Muscat Wine, No. 2.

Take a barrel, burn it out with the above extract, the same as you would do with sulphur, and fill it up with white wine.

Angelica Wine.

10 gallons of white wine,
1 “ “ spirit,
10 lb of white sugar,
 $\frac{1}{2}$ ounce extract of vanille,
20 drops oil of bergamot,
10 drops oil of cinnamon,
3 ounces gum arabic.

N. B. All wines used to these different fabrications ought to be well fermented, otherwise the production will not be clear and able to keep.

Different Receipts.

It often happens that wines at the second fermentation are inflicted with a sour smell of the linen that surrounds the cork in the bung-hole. In such a case said linen ought to be washed every 8 days in good brandy, mixed with half the quantity of caramel.

In case, wines work to strong in their second fermentation, they should be drawn off.

In case, red or white wines have a sour smell, or taste, apply to 150 gallons:

- 7 pounds of white sugar,
- 4 pounds of german magnesia,
- 2 pounds of burnt lime,
- 1 gallon of spirit.

All such wines as these ought to be used as quick as possible, because the sourness returns generally in three or six months.

To stop the fermentation in wines, take to 150 gallons, one pound of strang roasted lime; to get the same put the lime in small pieces in a pan and roast the same for one and a half hour over a very strong fire.

For bad taste or smell, if it should descent from the barrel, try the following method:

Roast Barley like coffee and put the same in a long fine bag through the bung-hole into the barrel, so that the bag touches the bottom of the same, change the barley every 24 hours for three days and then draw off the wine in another clear barrel.

Wine Clearing.

- 1). For white wine take to 100 or 150 gallons:
 - 5 ounces burnt alum,
 - 1 pound of chalk,
 - 2 eggs, the white of them,
 - $\frac{1}{4}$ gallon of spirit,
 - 1 gallon of water,

mix all well together, put it in the barrel, stir it up well and leave it stand—in three days the wine will be clear.

2) Dissolve one pound pulverised gum arabic in one-quarter gallon of spirit and put it in 100–150 gallons of wine, it will clear in 3 days and don't need to be drawn off.

3) This method is likewise good and very cheap. Boil in a gallon of water 5 pounds of wheat for one hour, filter and put it in 100–150 gallons of wine, stir it up well and in three or six days it will be clear.

Here, I wil' yet observe, that these 3 different methods do no harm whatsoever to the wine but it is different with another method, frequently resorted to in Los Angeles, namely :

The clearing with milk. The milk forces the wine-substance to the bottom, in consequence of which the wine will loose a great deal of its strength.

Clearing of Redwine.

1) For 100–150 gallons use :

- $\frac{1}{4}$ gallon of fresh blood,
- $\frac{1}{4}$ pound of fish scales,
- $\frac{1}{4}$ pound of salt,
- $\frac{1}{8}$ gallon of spirit,

mix it, put it in the barrel and stir it up well. This method generally takes 8 days.

- 2) $\frac{1}{2}$ pound of gum arabic,
 $\frac{1}{4}$ pound of salt,
 $\frac{1}{4}$ gallon of spirit,

mix it and use it the same as the first.

For very common wine, either wite or red, use to 100–150 gallons :
 $\frac{1}{4}$ pounds of fine sand, washed very clean and put it into the wine, in about 14 days it will clear the wine.

This method is especially recommended for the clearing of vinegar.

Discoloring of Wines.

Frequently you find white wines with a light red color, which, consequently are not easy saleable. In such a case, mix to 100–150 gallons of wine, 7 pounds of pulverised coal of burnt bones and leave it in there for 36 hours, then filter and clear it with gum arabic.

This receipt is also good for red vinegar.

About treating Winebarrels.

All barrels ought to be well cleaned and afterwards burnt out; the charred staves never hurt the wine.

To burn the barrels for white wine with sulpher may be very well but must be done moderately.

Sulpher must not be used for barrels destined for red wine, but good spirit, and in the following manner: take one-half pint of spirit to a pipe of a 100–150 gallons, ignite it, but leave the bunghole a little open so as to give the spirit a chance to burn and to be safe from explosion.

If you do not use the fermentation-casks any longer paint them with lime and leave them so till next season. Do the same with the wine barrels.

To keep worms from wine barrels take:

- 1 pound of linseed oil,
- 1 ounce sugar of lead,
- 4 ounces of salt,
- 2 ounces of alun,

boil it and dissolve any kind of ground color in it and paint the barrels with it. Lime dissolved in water, mixed with milk, salt and a little gluewater, keeps worms also from barrels if painted with.

Vinegar.

To make vinegar out of wine it is necessary to thin the wine so that 100 parts contain only 5 parts of spirit; this reduced wine put in an open barrel on a warm place and mix the following sour dough with it for 100 gallons:

- 5 pounds of flower,
- 1 gallon of water,
- 1 pound of mustard powder,
- $\frac{1}{2}$ pound of cremor tartary,
- $\frac{1}{2}$ pound of acetic ether,

mix all well together and let it stand till it is quite sour, which, in warm wether, will be in 8 or 14 days.

In the same way you can make good vinegar out of liquid what accumulates in all liquor saloons: such as refuse of beer, liquors, wines and the water in which you wash the glasses. Another way to make good vinegar is to take for 100 or 150 gallons of reduced wine:

4 pound bread,
½ gallon of brewers yeast,
and let it ferment together.

Distillery and Rectifying of California Brandy.

About the fermentation, I will only say, that the material to be distilled must have neither too much nor too little of it, because if the same is too sweet it will produce too small a quantity of brandy, but if it is too sour the quality will be too bad because it contains too much acetic ether.

If you want to make Brandy out of the husk of grapes you ought always add some sediment of wine, so that the contents cannot burn, the kettle ought to be filled up as full as possible. As soon as the brandy commences to run out the fire ought to be slackened.

The first run, or strong brandy, need not be distilled over again, if it contains 50 per cent of spirit, but all what has less than 50 per cent must be kept separate and distilled over again.

If you want an extra good article add to every kettle of 100–150 gallons, one-quarter pound of potash and 3 pounds of burnt bones. These articles have the quality to draw all the bad oil out of the brandy.

The rectifier construct the same as stated before, but pour in the following ingredients:

First layer — 5 pounds of oak bark,
2 pounds slippery elm.

Second layer— 50 pounds of clean gravel,

Third layer— 30 pounds of pulverised bone coals,

Fourth layer— 20 pounds of fine cut straw.

Put a piece of flannel below and above each layer the same as with the rectifier for spirit.

Before you put the brandy in the rectifier add to every 50 gallons one-half pound of salt and one eighth pound of potash. A rectifier fixed up as stated will do for 1000 or 2000 gallons, after which it must be cleaned and filled with fresh ingredients.

If brandy has got a sour taste take for every 100 gallons :

5 pounds of common burned gypsum, (ground),
1 gallon of honey,

put it in the barrel, mix it well and leave it stand for 8 days; if it is not clear then, clear it with one-half pound of gumm arabic.

Gum arabic is always good for any kind of liquor for it makes them look older.

Here, I will observe, that all liquors made and cleared in this manner may be reduced until they possess very little strength, without loosing the proof which comes from the slippery elm, used in water for reducing liquors, as well as used in the rectifier. Always use prepared water No. 1 to reduce liquors with.

If liquors have a bad color from the barrel make use of the following method in clearing or discoloring: take for 50 gallons one-eighth pound of potash and 5 pound pulverised bone coals; let it stand for 8 days, filter and clear it with gum arabic.

Syrup.

As the principle rule for the manufacturing of all syrups take :

70 lb white sugar,

10 gallons of water, warmed to 125-135° Fahrenh.

$\frac{1}{4}$ lb of gum arabic,

for this quantum use the following flavors :

Lemon,

1 ounce oil of lemon dropped on a pound of sugar.

Orange,

1 ounce oil of orange dropped on a pound of sugar.

Raspberry,

2 gallons of raspberry juice.

Gum,

1 pound of gum arabic.

DIFFERENT KINDS OF DRINKS. GOOD BOTTLEBEER.

Take 10 gallons of beer, as fresh as possible, 1 pound of white sugar and 3 gallons of lukewarm water; before putting the beer in bottles, rince out the latter with a little rum,; after filling cork them well, tie every cork well and lay the bottles lenghtways in some sand.

Lemon Beer.

5 gallons of water,

6 lemons, cut in slices,

3 ounces juniper berries,

3 ounces sambuco (elder flower),

5 pounds of sugar.

1 ounce cremor tartary,

$\frac{1}{4}$ gallon of brewer's yeast,

cover and let it ferment for three or four days, then filter and put it in bottles.

Cider, from dried apples.

10 gallons of water,
10 pounds of dried apples,
10 pounds of sugar,
 $\frac{1}{4}$ pound of juniper berries,

boil all together about two or two and a half hours, filter and mix it in ten gallons of cold water.

Cider, from fresh apples.

10 gallons of water,
the juice pressed out of 80 pounds of apples,
3 pounds of sugar,

let it settle in a barrel before drawing of, else it will leave sediments behind.

Lemonade.

CHEAP, AND WELL TASTING.

10 gallons of water,
3 pound acid acetric,
 $\frac{1}{4}$ gallon of spirit, dissolve in this,
 $\frac{1}{2}$ ounce of oil of lemon,
15 pound of sugar,
 $\frac{1}{4}$ pound of cremor tatory,

mix all well together and fill it in bottles, bind the cork well and put the bottles lengthwise in sand.

To make fresh bottled wine old.

In France they put the fresh bottled wine in a kettle, full of water. heat it to 105° Fahrenheit, leave them in there five minutes take them out and lay them in the sand.

About bottles.

Any bottles used for beer, wines or liquors, must be perfectly clean; the best plan is to clean them with coarse sand or with sawdust; it is very dangerous to clean them with shot, because if any stay in the bottles you are liable to be poisoned by the lead. To wash bottles well, put a hand full of salt in the water.

Wine and beer bottles always rinse out with a little brandy, which dissolves all watery parts left therein and prevents the beverage to become sour or unclean.

Corks must always be taken of the best quality, and before using put them in lukewarm water, in which you may put 5 or 10 drops of clear oil, this makes the corks more slippery and they work better in, whether driven by hand or machinery. Always lay filled bottles down lengthwise so that the cork is covered with the liquid.

Wines or liquors, which put on a little sediment yet, should be set on the cork so that if the latter is drawn out the sediment will adhere to it. Tinfoil looks very well on bottles, but it ought always to be sealed round the head of the cork.

Lac's for sealing bottles.

The principle parts are always :

- 5 pounds of burgund rosin,
- 3 pounds of ground chalk,
- $\frac{1}{4}$ pound of linseed oil,
- $\frac{1}{2}$ pound of wax,

boil all together on a small fire and add the following colors :

LIGHT RED.

- 1 pound of red lead.

FINE RED.

- 4 ounces of cinabar.

GREEN.

- 1 pound of imperial green.

BLUE.

- $\frac{1}{2}$ pound of ultramarine.

YELLOW.

- 1 pound of crome yellow.

BLACK.

- $\frac{1}{2}$ pound of lampblack,

WHITE.

- 1 $\frac{1}{2}$ pound of pulverised white lead.

BRONZE.

- $\frac{1}{2}$ pound of bronze powder,
- $\frac{1}{2}$ pound of crome yellow.

Glue for labels and tinfoil.

1 pound of gum arabic,
 $\frac{1}{2}$ gallon of water.

Cheap Glue or Paste.

1 pound of starch, dissolved in cold water and afterwards boiled.

Ink for marking bottles or boxes.

2 pounds of log-wood,
1 pound of vitriol of copper,
1 pound of vitriol of iron,
1 pound of crushed gall-nuts,
 $\frac{1}{4}$ pound of gum arabic,
1 pound of sugar,
 $\frac{1}{2}$ gallon of vinegar,
1 gallon of water,

mix and leave it stand 14 days, when the ink will be good. This ink is very good too for writing purposes.

Dissolution of all ethereal oils.

Put in a champagne bottle $\frac{1}{2}$ gallon of spirit, add to it the oil given in the different receipts and shake the bottle so long before a fire until the spirit takes its natural color again; or if you have warm water handy put the bottle in that.

At the first treatment you ought to be very careful that no spirit is left on the outside of the bottle. Likewise, never set the bottle on a stove or near the fire because an explosion may happen and the spirit ignite, which never can happen in your hands, as the bottle always can stand as much heat as your hands.

Color for the different liquors.

YELLOW.

Put $\frac{1}{4}$ ounce of saffron (whole) in $\frac{1}{4}$ gallon of warm water and rub it in pieces with your hands.

YELLOW BROWN.

Put 5 pounds of sugar (white) in a pan, capable of holding 3 gallons, and burn in the same quite black-brown, afterwards thin it with one gallon of warm water.

RED.

- 1) Boil one quarter of a pound of cochineal for one hour in one and a half gallon of water.
- 2) Boil in one gallon of water, for one hour, one pound of sandal wood and one ounce of alum.

WINE COLOR.

- 1) Mix the juice of elder berries with one-eight part of spirit.
- 2) Boil in one quarter of a gallon of water one and a half pound of malva aboria.

All these colors can only be preserved by mixing them with one-eight part of spirit.

If you wish to give more strength to your liquors use for fifty gallons the following:

- 1) Boil in 2 gallons of water five pounds of ground black pepper.
- 2) Boil in two gallons of water two pounds of red pepper and one pound of grain of paradise.

Both of these receipts are very good.

Wine-Cellar.

The assertion, that wine could be kept as good in a common wooden building as in a cellar is a clear nonsense in my opinion, because in a dry cellar with even temperature it is bound to keep better and longer.

The depth, of a wine-cellar depends on the ground and other circumstances. If you should discover water at the depth of 6 or 7 feet the cellar ought not to be laid deeper than 3 or 4 feet. The walls on the sides should be made of dry stones as high as the ground goes, but above the ground they should be made of a double board wall, the interval to be filled up with straw for the roof straw is likewise the best, because it keeps the temperation even and proportional. There ought to be at least four air-holes in a good cellar; as near to the bottom as possible, but they should not go exactly straight up but run parallel with the ground and in the ground about 3 or 4 feet.

The barrels in the cellar ought to be kept clean inside and outside and the hoops painted occasionally, for which the following is the best as it keeps away the rust best and longest:

Boil together 1 pound of Linseed oil,
4 ounces of hogs lard,
4 ounces oil of olive,
2 ounces of sugar.

If you want to ship the wine across the sea, and double barrels are too dear for you, make use of the following method :

Wind around the barrels straw ropes and keep them in their places with 5 or 6 thin pieces of wood and two iron hoops ; on the bottom sides put straw as well and cover it with linen. This manner of packing is cheap and very good because the straw keeps the wine in even temperature.

Something about the manufacturing of common wine.

Good red wine you may make in the following simple manner :

Take fresh, healthy grapes and pick out the stalks very carefully, mash the clean berries in a barrel or tub and let them ferment in it, the same commences generally in 48 hours if the temperature is from about 80 to 90° Fahrenheit. After 5 or 6 days, when the fermentation is over, draw of the wine in a barrel at the bung-hole of which is applied an air-tube

N. B. This kind of wine I made frequently at Tule river, near Visalia, with a very good result.

The Italians make their wine in a different manner. They mash their grapes all in a barrel and after 3 or 4 days, when the principal fermentation is over, they close the barrel and leave it closed for 2 or 3 months, then, they draw the clean wine of in fresh barrels.

White wine I manufacture in the following simple manner :

I press the juice out of the grapes and keep it 3 or 4 days in an open tub, until the principal fermentation is over, then I draw the wine in a barrel with an air-tube.





