DISTILLED WATER.

The quality of the distilled water used in pharmacy has from time to time given rise to much discussion, which, at all events, has had the effect of drawing attention to the very unsatisfactory condition in which this article is often met with. Distilled water containing ammonia is very prone to develop fungoid growths, and there are many apparently obscure cases of fermentation and decomposition, causing much trouble and loss, which may be traced to the presence of fermentative bacteria and fungoid germs as impurities in the distilled water. The subject merits more attention than it usually receives, as organic matter of this description is almost more objectionable for many pharmaceutical purposes than inorganic salts.

A still of large capacity was formerly necessary to furnish sufficient distilled water for average requirements, but the small stills on the continuous principle, which have of late years been placed on the market, are far more convenient in use, and need but little attention. Evidently, in a continuous still, the first portion of the distillate cannot be rejected, and the product will always contain ammonia, unless an acid be placed in the still to retain it. To effect this, and at the same time destroy organic matter and nitrites, various substances have been proposed, such as alum and potassium permanganate, sulphuric acid, phosphoric acid, potash and permanganate of potash, and permanganate acidified with sulphuric acid. This last combination is the most effective with a second-rate water, but the distillate always acquires a peculiar odor, which for certain purposes is objectionable. With the view of avoiding this odor if possible, I tried the substitution of potassium bichromate for the permanganate, and obtained a distillate which was odorless, and answered the pharmacopœia tests. Suitable proportions for use in a continuous still are 10 grains of bichromate and 6 fluid drachms of sulphuric acid for each gallon of the still's capacity. With water from the London mains, sulphuric acid alone, or even oxalic acid, will furnish a very pure water, which, if properly kept, never becomes cloudy or develops fungoid growths.

A microscopical examination of samples of distilled water containing fungoid will also show small particles of vegetable tissue, introduced as dust, which have formed nuclei for the growth of bacteria. The appearance of fungi in distilled water is generally attributed to ammonia in solution, but they probably quite as often rise from the fragments of vegetable *debris*, always to be found in the dust of a pharmacy, which form a weak infusion very favorable to their development.

A useful form of vessel for the storage of distilled water consists of a large glass bottle with a stoneware tap and narrow neck, the latter being plugged with cotton wool and surmounted by a loosely-fitting tin cap. Storage tanks constructed on this principle preserve their contents in a perfectly sweet and clear condition, however warm and unfavorable the situation in which they may be placed.

"Jumping Beans."

BY PROF. L. E. SAYRE.

A short time ago the writer received from Trinidad, Col., a letter of inquiry concerning the so-called "jumping beans." Briefly stated, the answer given to this inquiry was as follows:

The jumping bean is obtained from a Mexican plant of the natural order euphorbiaceæ, which is habitually infested with the larva of a small moth, carpocapsa saltitans, West, and by some means not well understood this larva is inclosed within the walls of the seed, of which there are three, making up the berry or fruit of the plant infested. The imprisoned larva when it is warmed makes the seed roll about on a flat surface, or even jump a slight distance in the air.

The larva develops into its second stage in January or February, and the moth soon after issues through a hole previously cut by the larva.

The larva of the insect carpocapsa is very destructive to fruit, such as apples, pears, etc., depositing its eggs in the fruit as soon as set. The seed of the euphorbiaceæ, however, seem to be the most frequently infested by this pest.

The following reply was made by my correspondent:

"Yours received in reply to my inquiry concerning the so called 'jumping beans,' carpocapsa saltitans. Please accept thanks.

"The information concerning the destructive habits of the insect leads me to address you again, hoping that a word of warning from you may save the country from being literally over-run with this pest. On or about August 15th there came to my employer fifteen of these bug-infested beans, sent out by parties who claim to be the sole agents for the United States and Canada. These goods are offered only as a curiosity, and with the consignment came many copies of letters from widely scattered localities in the United States and Canada stating that the beans sold readily, some parties ordering one and two hundred, etc. It has recently come to my knowledge that there passed over the Santa Fe by express 10,000 of these pests, presumably to be sold over our country, and your statement being true, the farmer will have another evil to fight. To make matters worse the druggists are made the distributing agents, and like myself and my employer are innocently scattering the pests.

"A word from me of warning to the profession would not amount to much, but your influence might arrest the evil.

Our Department of Agriculture should be warned. The mails are being used to make the distribution."

In reply to this warning I would like to say that I do not think there is any occasion for alarm at present as the particular species of saltitans does not attack plants of economic value. Still it might be wise to be on guard fearing this species might change its habits.

The plant which it attacks especially was not described until late in 1891. This plant is named by I. M. Rose as sebastiana palmeri.

Attention was called to the insect by C. B. Riley, Government entomologist, at a meeting of the Entomological Society held at Washington in 1891.

Regarding the matter of spreading the pest I would say that so far as my observation has gone, 90 per cent. of the larvæ die before they leave the hands of those whom they have served to amuse as a kind of toy.—*Druggists' Circular.*

Storax Oil.

The first sensation obtained when smelling storax or storax oil, is that of an odor resembling benzol. This is due to styrol, a very volatile hydrocarbon, chemically related to benzol. Styrol constitutes the principal part of storax oil. When the oil is employed for perfumery purposes, it is necessary that the styrol should first be volatilized, in order that the remaining oily parts, which possess a pleasant odor of cinnamic ester and vanillin, and volatilize with great difficulty, may develop their odor.

The quality of the oil may be most easily estimated by placing a few drops upon a piece of filtering paper and inhaling the odor after the styrol has evaporated—*Schimmel & Co.'s Report.*

When to Stop Advertising.

When the population ceases to multiply, and the generations that crowd on after you and never heard of you stop coming on.

When you have convinced everybody whose life will touch yours that you have better goods and lower prices than they can get anywhere else.

When you perceive it to be the rule that men who never advertise are outstripping their neighbors in the same line of business.

When men stop making fortunes right in your sight solely through the direct use of this mighty agent.

When you can forget the words of the shrewdest and most successful business men concerning the main cause of their prosperity.

When every man has become so thoroughly a creature of habit that he will certainly buy this year where he bought last year.

When younger and fresher houses in your line cease starting up and using the newspapers in telling the people how much better they can do for them than you can.

When you would rather have your own way and fail, than take advice and win. —*Ex.*