

MEDICATED WATERS.*

BY JOHN K. THUM.

The Pharmacopœia contains 17 medicated waters, of which 6 are made from volatile oils and 5 of these by triturating the volatile oil with purified talc, gradually adding the required amount of distilled water and filtering. Medicated waters made in this manner are very unsatisfactory; for the first few days they show up fairly well, but from then on they rapidly change for the worse, so far as appearance and pleasant flavor obtain.

Now the United States Pharmacopœia does not insist that these waters must be made according to this procedure, as the following quotation from it clearly indicates:

The Medicated Waters, when prepared from volatile oils, are intended to be, as nearly as practicable, saturated solutions which must be clear, and free from solid impurities. In the processes which follow, the solution of the volatile oil is facilitated by the use of purified talc; but the solution may, if preferred, be aided by replacing the purified talc by pulped or shredded filter paper; waters may also be made by the addition of volatile oils to hot water and separation of the excess of the former, or by the distillation of the drug or the volatile oil with water, if by either of these methods the finished product corresponds in all respects with the official requirements.

Bitter Almond Water is directed to be made by dissolving the oil in distilled water by agitation and filtering through a wetted filter paper; no mention is made of using hot water. By this method a water is obtained that looks well and retains its appearance indefinitely. Creosote Water is directed to be made in the same manner, and Chloroform Water in a manner that is somewhat similar; in this case the procedure is as follows: Add enough chloroform to a convenient quantity of distilled water, contained in a dark amber-colored bottle, to maintain a slight excess of the former after the contents have been repeatedly and thoroughly agitated. When required for use pour off the needed quantity of the solution, refill the bottle with distilled water and saturate it by thorough agitation, taking care that there be always an excess of chloroform present.

In 1913 the writer presented a paper in which he advocated the making of camphor water by agitating small pieces of camphor with distilled water in a bottle and replenishing the dispensing bottle by pouring through a piece of gauze tied over the neck of the stock bottle. He is still wedded to that method of making camphor water. Success with this method naturally led to experiments with the other medicated waters and it was found that fine waters, that remain clear indefinitely, can be made by simply agitating the volatile oils with distilled water and filtering through a wetted filter paper in the same manner that the Pharmacopœia suggests in the making of bitter almond and creosote water.

The technic for this method of making medicated waters is very simple and is as follows: Eight mls of volatile oil are poured into a four-litre bottle and distilled water added in portions, the bottle being vigorously shaken after the addition of each portion; sufficient distilled water is then added to make up to four litres.

When the dispensing bottle requires replenishing the stock container is well shaken and the medicated water filtered through a filter paper.

Since making our medicated waters in this manner we have never been troubled

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by the development of fungi or the growth of other microorganisms. This is certainly an advantage that the practical pharmacist can appreciate as well as the fact that his medicated waters are always clear and sightly.

The saturation of these waters can easily be determined. If to an equal amount of water a 50 percent solution of magnesium sulphate is added, there is at once developed a distinct cloudiness.

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THE CULTIVATION OF CASTOR OIL PLANT AS A COMMERCIAL POSSIBILITY: *RICINUS COMMUNIS*, *PALMA CHRISTI*.*

BY JOSEPH L. LEMBERGER.

Always an admirer of the beautiful *palma christi*, a thought possessed the writer to plant some of the seed of the variety known as *Ricinus sanguineus*, a beautiful, stately and highly colored plant, and note results as to its commercial value. My experience was satisfactory beyond expectation, having no previous thought beyond that of an ornamental bush, and when the fact has materialized, that the castor bean can be cultivated as a commercial product a large agricultural asset will be attained.

After the season had closed correspondence with seed crushers and vegetable oil producers has convinced me that the subject is entirely feasible and deserves more than passing attention—weather conditions appearing as the only doubtful factor. This also applies to other crops as well.

The cultivation is very simple. The seed will generate almost anywhere, provided the soil is good. Experiment is being made this summer by planting the seed along the fences where the plow and harrow cannot be used, and only when the commercial fact is proven or established, need we think of field culture.

I am interesting farmers in my county and experiment will be made on a much larger scale—will try some waste places on the farm, and, if successful, may publish the results, if spared, some future time.

It will be interesting to know that there is not at this time any attention paid to cultivation of castor oil beans for commercial purposes in this country. After the writer began formulating this paper, searching for data, etc., reference was made to Professor Wm. Procter's article along similar lines in 1855, giving a particular account of the mode of cultivation in western states (*American Journal of Pharmacy*, vol. xxviii, p. 99). At that period we remember the *St. Louis Brand Castor Oil* stenciled on the boxed containers and barrels of castor oil. The present generation of pressers of the castor oil seed know nothing of the industry of that period and it is evident that there is no longer any attention given to the cultivation of the castor oil bean as an industry. The journal quoted from has the following, which I prefer to make part of this paper as a pleasant memory of our departed friend:

Southern Illinois is the source from whence all the beans are brought that are sold or manufactured in St. Louis. The ground is prepared as for other crops, and when there is no longer any danger from the spring frosts, the seeds are planted in hills and rows, much in the manner of planting Indian corn, with the

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