worm. In every case in which I have administered it, the worm has been expelled, and the symptoms relieved. In general, the animal has been voided of a livid hue, and evidently killed; but in one instance, in which a portion of five feet in length was passed after two fluid ounces of the oil had been taken, it was not livid, and when voided, exhibited evident signs of animation. In no instance have I perceived that the large doses of the Oil, which were taken for the above purpose, produced any particular effect on the urinary organs. The more usual sensible effects are temporary intoxication, accompanied with considerable nausea, and sometimes vomiting, which, after two or three alvine evacuations, subside, and leave a degree of languor for ten or twelve hours. The pain of the stomach and side, which is an usual concomitant of the disease, is always removed by the Oil. I have also given this oil in combination with Cinchona, with evident benefit in rheumatism; particularly in that modification of the disease, which attacks one side only of the head, and is periodical; the paroxysms generally coming once or twice in the twenty-four hours. Tincture of Capsicum, in doses of ℥iij. is a useful adjunct to the bark and turpentine in this affection. In some persons, however, Turpentine affects the kidney, producing pain and bloody urine, and in others, its administration has produced a severe erythematic eruption over the body. These effects, however, are in some degree lessened by purifying the oil of Turpentine by means of alcohol, as Dr. Nimmo suggests. To eight parts of the Oil add "one part of alcohol and agitate; on the mixture being left at rest, the oil falls to the bottom, and the spirit holding the impurities in solution floats at the top. On repeating this process three or four times, pouring off the spirit each time, the oil is left nearly tasteless, and inodorous[1]." The dose in rheumatism is f℥i. repeated every four hours; but in tænia it may be given in doses of f℥j. combined with syrup of poppies, repeated every six hours until the worm is expelled.

AQUÆ DISTILLATÆ.

DISTILLED WATERS.

IT has been already remarked that the volatile oil, on the presence of which the odour and the taste of plants in a con-

[1] *Journ. of Science*, vol. xiii. pp. 65, 66.

siderable degree depend, is elevated during distillation with water; and a portion of it being retained in solution, the water thus acquires the odour and taste of the vegetable with which it is distilled. The qualities, however, thus acquired by water, are scarcely, in any case, sufficient to give it much power as a remedy; and thence, the distilled waters are generally employed as elegant vehicles only for the exhibition of more active substances.

The following general directions are given by the London College for the preparation of these waters.

"WATERS are to be distilled from dried plants, unless it be otherwise ordered, because fresh plants cannot be procured at all times of the year. When fresh plants are employed, the weight of them ordered is to be doubled.

"To every gallon of these waters add five fluid ounces of proof spirit, to preserve them from spoiling."

The Edinburgh College orders half an ounce of proof spirit, and the Dublin College half a fluid ounce of rectified spirit, to be added to each pound of the water.

Waters distilled from aromatic plants are more grateful when the plant is used in the dried state; but when delicate odorous flowers or herbs are employed, and the water acquires little more than odour by the distillation, the vegetable should always, if possible, be used in the recent state. Much care is required in conducting the process, to prevent any of the vegetable matter from being scorched, and to stop the distillation before the water is tainted by empyreuma. Notwithstanding, however, every attention which can be given, distilled waters, when newly prepared, have a very disagreeable empyreumatic odour, to dissipate which the vessels holding the waters must be left open to the air as long as any of the unpleasant odour remains; but, afterwards, it is essential for the preservation of the waters that they be preserved in closely-corked vessels.

When long kept, many of the distilled waters undergo a species of decomposition; they become slightly sour, and a ropy, viscid matter forms in them, owing to the essential oil they contain undergoing decomposition, and changing into mucilage. The addition of the spirit is intended to prevent this from taking place, but it is not adequate to the effect intended; and a much preferable mode is to re-distil the waters, after which they will keep good for several years.

Several of these waters are prepared on a great scale of a superior quality to any that the apothecary can prepare, and cheaper.

AQUA DISTILLATA, Lond. *Distilled Water.*

"Take of Water, *ten gallons.* First distil four pints,

which are to be rejected, and then distil four gallons. Preserve the Distilled Water in a glass bottle."

Edinburgh.

"Let Water be distilled in clean vessels, until two-thirds of the quantity employed have distilled over."

Dublin.

"Take of Spring Water, *twenty pounds.* Put them into a glass retort, and having rejected the first pound which comes over, let one gallon be distilled over with a gentle heat."

Syn. Eau distillée (*F.*), Einfaches destillirtes wasser (*G.*), Gemeenes Destillert Water (*Dutch*), Watten (*Swed.*), Acqua Distillata (*I.*), Aqua Distillada (*S.*).

Water is almost universally diffused over the surface of the earth, but it is not found perfectly pure in any place, which is owing to its great solvent powers enabling it to take up a portion of many substances with which it must come into contact, in its natural state. These impregnations, however, in spring and in river water, are not sufficient in general to give them any very sensible taste, or render them unfit for the ordinary purposes of life; but for many Pharmaceutical purposes it is necessary that the water be absolutely free from every foreign ingredient. *Rain water* is the purest kind of natural water, but it nevertheless contains a portion of carbonic acid gas, and minute quantities of carbonate of lime, and of muriate of lime; in spring water, besides these ingredients, is found a small portion of muriate of soda; *well water*, which is spring water obtained from a greater depth, holds in solution a much larger portion of carbonic acid, and several earthy salts, the principal of which are sulphate and carbonate of lime; and *river water* is impregnated with different proportions of carbonate of lime, sulphate of lime, and muriate of soda. By distillation water is freed from these ingredients, and rendered nearly pure; but it is tasteless and vapid owing to the absence of the air which it contains in its natural state. The process should be conducted slowly, with a moderate degree of heat, and not continued longer than the time specified in the formulæ, otherwise a minute portion of the saline matter contained in the natural water passes over in the distillation.

Although the necessity of distilled water for many Pharmaceutical operations is very obvious, yet, by too much refinement in this particular having been erroneously insisted upon in the former London Pharmacopœia, apothecaries have of late years almost altogether neglected its use, even in cases where it is absolutely necessary. This error the College has avoided in its present Pharmacopœia, and therefore it may be

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expected that the directions for using it will be strictly attended to. But, as it is not always easy for the apothecary to prepare distilled water, *rain water*, filtered through alternate strata of well-washed sand, or powdered flints and charcoal, will answer every purpose for which distilled water is required. Soft water is a more powerful menstruum of vegetable matter than hard water; and resinous substances cannot easily be mixed with water containing calcareous matter, even when mucilage is used, whereas they readily mix with very soft or distilled water. Perhaps it should be a rule to use filtered rain water only in all Pharmaceutical operations. In extemporaneous prescriptions distilled water is often ordered when there is no necessity for its use, and often neglected to be ordered when it is absolutely necessary. It may, therefore, be useful to know that it is necessary in formulæ containing any of the following substances: *Acidum Sulphuricum*, *Acidum Citricum*, *Antimonium Tartarizatum*, *Argenti Nitras*, *Cuprum Ammoniatum*, *Ferrum Tartarizatum*, *Hydrargyri Oxymurias*, *Liquor Ammoniæ*, *Liquor Plumbi Acetatis*, *Liquor Potassæ*, *Plumbi Superacetas*, *Solutio Muriatis Barytæ*, *Vinum Ferri*, *Zinci Sulphas*, *Ferri Sulphas*.

AQUA ANETHI, Lond. *Dill water.*

Syn. Eau d'Aneth puant (*F.*), Acqua di Aneto Puzzolente (*I.*).

"Take of Dill seeds bruised, *a pound.* Pour on them so much water, that during the distillation there may be a sufficiency to prevent empyreuma. Distil one gallon."

This water has an unpleasant odour and little pungency. It is used principally as a carminative for infants: and is a good vehicle for giving Magnesia and Rhubarb to these tender patients.

AQUA CARUI, Lond. *Carraway Water.*

Syn. Eau de Carvi (*F.*), Feldkumel wasser (*G.*), Acqua di Carvi (*I.*).

"Take of Carraway seeds bruised, *a pound.* Pour on them so much Water, that during the distillation there may be a sufficiency to prevent empyreuma. Distil a gallon."

Carraway water possesses a considerable share of the aromatic flavour and pungency of the seeds, and may be used for the same purposes as Dill water.

AQUA CITRI AURANTII, Edin. *Water of Orange-peel.*

Syn. Eau d'Orange (*F.*), Pomeranzen wasser (*G.*), Acqua de Arancio (*I.*).

"Take of fresh Orange-peel, *two pounds.* Add so much water that when ten pounds have been drawn off by distillation, there shall remain a quantity sufficient to prevent empyreuma. After due maceration distil ten pounds, to which add five ounces of diluted alcohol."

The water has the flavour only of the orange-peel.

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AQUA CITRI MEDICÆ, Edin. *Water of Lemon-peel.*

Syn. Eau de Citronier (*F.*), Citronen wasser (*G.*), Acqua di Limone (*I.*).

This is prepared in the same manner as the former; ten pounds of Water being distilled from two pounds of fresh Lemon-peel. It has the flavour of the peel, but is seldom used.

AQUA CINNAMOMI, Lond. Dub. AQUA LAURI CINNAMOMI, Edin. *Cinnamon Water.*

Syn. Eau de Cannelle (*F.*), Zimmt wasser (*G.*), Acqua di Cinamomo (*I.*).

"Take of Cinnamon bark bruised, *a pound;* Water, *a pint.* Macerate the bark in the water for twenty-four hours; then add a sufficient quantity of water to prevent empyreuma during the distillation. Distil a gallon."

This water is milky, and has the agreeable flavour and pungency of the Cinnamon, without its astringency; but the oil being ponderous is apt to separate, leaving the water clear and insipid. It is a gentle stimulant and aromatic, but is chiefly used to cover the nauseous taste of other medicines.

AQUA LAURI CASSIÆ, Edin. *Water of Cassia Bark.*

Syn. Eau de Casse (*F.*), Acqua di Cannella (*I.*).

This is prepared from one pound of bruised Cassia bark, in the same manner as the former, for which it is often substituted, being less expensive; but it is also less agreeable.

AQUA FŒNICULI, Lond. AQUA FŒNICULI DULCIS, Dub. *Fennel Water.*

Syn. Eau de Fenouil (*F.*), Fenchel wasser (*G.*), Acqua di Finocchio (*I.*).

"Take of Fennel seeds bruised, *a pound.* Pour over them as much water as will prevent empyreuma during the distillation. Distil a gallon."

It is rarely if ever employed.

AQUA MENTHÆ PIPERITÆ, Lond. Edin. AQUA MENTHÆ PIPERITIDIS, Dub. *Peppermint Water.*

Syn. Eau de Menthe poivrée (*F.*), Pfeffermunz wasser (*G.*), Acqua di Menta Piperitide (*I.*).

"Take of Peppermint, *a pound and a half,* (*three pounds,* Edin.) Pour over it as much Water as will prevent empyreuma during the distillation. Distil a gallon, (ten pounds, *Edin.*)"

Peppermint water has the flavour and taste of the plant in a considerable degree. It is sometimes used alone as a carminative, but more generally for the purpose of covering the taste of other medicines.

AQUA MENTHÆ VIRIDIS, Lond. AQUA MENTHÆ SATIVÆ, Dub. *Spearmint Water.*

"Take of Spearmint, *a pound and a half.* Distil a gallon of water in the same manner as above."

AQUA PIMENTÆ, Lond. AQUA MYRTI PIMENTÆ, Edin. AQUA PIMENTO, Dub. *Pimenta Water.*

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