

PHARMACOPŒIAL VEGETABLE DRUGS.

ment was so successful that Frederick the Great purchased the formula for an annuity of thirty pounds, conferring on its originator the dignity of "Aulic Councillor." Madame Nuffler, the widow of a surgeon at Murten, Switzerland, was paid 18,000 livres by Louis XIV for a tape-worm cure consisting chiefly of powdered fern root. J. Peschier 1825, a pharmacist of Geneva, introduced the ethereal extract, which was not, however, employed in England to any extent until the middle of the last century. Its empirical record introduced male fern to the orthodox medical profession.

AURANTII DULCIS ET AMARI CORTEX

Sweet and Bitter Orange. The orange, (*Citrus*), was unknown to the ancient Greeks and Romans. The Arabs, (Galesio, 255), are accepted as having introduced it into Europe, first through Africa, Arabia, and Syria, from its original home in Northern India. In that country a wild orange still grows, supposedly the parent of the cultivated fruit, be it sweet or bitter. The first specimen to find its way into Europe was the bitter orange, cultivated in Rome in A. D. 1200, the sweet orange not being introduced until the fifteenth century, when it was imported by the Portuguese. The first oranges brought into England, seven in number, were imported by a Spanish ship in 1290. An Arabian physician of the twelfth century, Avicenna (30), employed the juice of the bitter orange in medicine.

BALSAMUM PERUVIANUM

This drug, obtained from the *Toluifera pereiræ*, came to the attention of the earlier Spanish explorers in South America as a substance commonly employed by the natives as a remedy for wounds. It constituted a part of the tribute paid by the natives to the Indian chiefs of Cuscatlan, to whom it was presented in curiously ornamented earthen jars.* On its first importation into Europe it brought enormous prices, as much as \$45 an ounce, and in Rome 100 ducats, or over \$200 an ounce. Pope Pius V permitted the Bishop of the Indies to substitute this Balsam of Guatemala for that of Egypt in the preparation of the chrism used in the Catholic churches. Various early descriptions of travelers refer to it more or less enthusiastically, between the conquest of Guatemala (A. D. 1524), and 1628, at which date Hernandez (314) described the tree. From the domestic use of the drug it crept into German pharmacy in the beginning of the seventeenth century. In consequence of the fact that the exports of Guatemala came through the port of Lima, Peru, the misleading name of "Peruvian Balsam" was in the early days affixed to it, paralleling somewhat the record of Mocha coffee, which is not grown in Mocha or even thereabout, but was exported therefrom in the early days of Arabian coffee.

* This reminds us of the curious jars in which we observed Mastich sold on the island of Scio by the collectors. These jars, holding a few ounces of the purest and clearest tears, have been thus an article of local commerce since before the Moslem rule.

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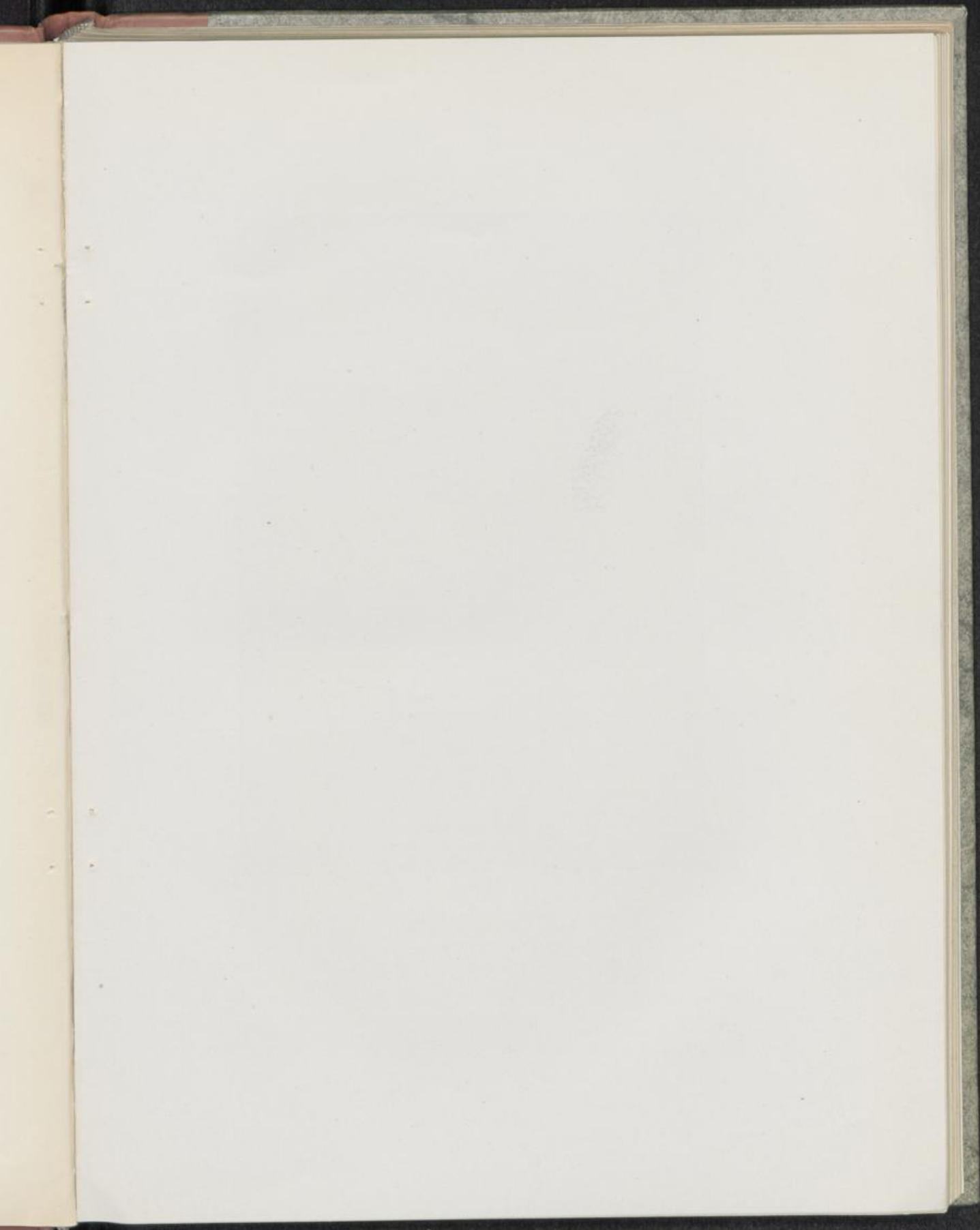
BALSAMUM TOLUTANUM

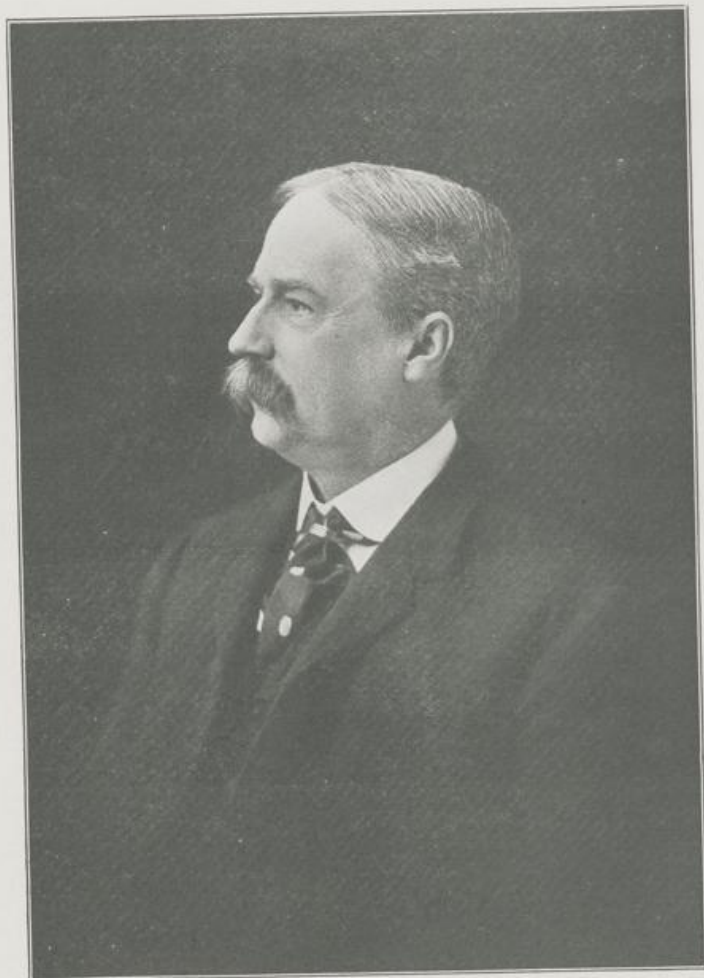
This South American and West Indian drug (obtained from *Tolui-fera balsamum*), was in use by the natives on the discovery of those countries, being to-day collected after the native manner, as is also Balsam of Peru. Monardes (447) in his treatise, 1574, on West Indian productions, describes the Indian method of incising the bark and affixing shells of black wax to receive the balsam, in a district near Cartagena called Tolu, from which it takes its name.* He adds that it was much esteemed by the Indians, and later by the Spaniards, who transported it to Spain. Clusius (153) received, 1581, a specimen from Morgan, an apothecary to Queen Elizabeth. The price list of the city of Frankfort, Germany, 1669, gives it a place, while in 1646 it was noticed in the records of the city of Basle. Notwithstanding that Monardes (447) figured a broken pod and leaflet, and Humboldt and Bonpland (331) saw the tree in New Granada (1799), it was reserved for Weir (1863), a plant collector to the Royal Horticultural Society, London, to obtain the first good specimens of the pods and leaves, Guerin, 1868, first obtaining the flowers. Thus a complete description of a drug known for centuries was finally authoritatively established. The introduction of Balsam of Tolu into medicine and pharmacy followed the track (as is true of all other natural drugs of the Pharmacopœia), of its empirical record.

BELLADONNAE RADIX ET FOLIA

The plant *Atropa belladonna* is native to Southern Europe, extending thence to the Crimea, Caucasia, and the northern parts of Asia Minor. About 1504 a book appeared in Paris titled the *Grand Herbiere*, which carried the first authentic notice of belladonna, although the term "solatrum furiale," used by Saladinus of Ascoli (570), about 1450, is presumed to refer to it. Its effects, internally, were subjects of treatises by Amoreaux (20a), Paris, 1760; Daries (184), Leipsic, 1776; Münch (453), Gottingen, 1783 and 1785, and subsequently by all who wrote comprehensively on medicine. In toxicology, the German botanist, Leonard Fuchs, (251) figured the plant as *Solanum somniferum*, 1542, fully identifying its poisonous properties, and J. M. Faber, Augsburg, 1677 (231a), wrote on its poisonous action. But the people in the plant's habitat have always been aware that all parts, even to the berries, were poisonous. In the eye, so far as we can locate its record, the first study concerning its local effect is that of Himly (317a) of Paris, 1802, although country people in the habitat of belladonna, from all time, know that it possesses the power of dilating the pupil. In "regular medicine" belladonna has a more recent introduction, due to the commendation of the well-known pharmacist, Mr. Peter Squire (611), of London, who about 1860 commended it as the basis of a useful liniment, for the relief of neuralgic pains. The drug is now used chiefly in the making of the alkaloid atropine, and in the prepara-

*This reminds one of the method, in Asia Minor, of collecting the juice of the Scammony plant in the half shell of the clam.





*with kind regards
Joseph P. Remington*

[From an autographed photograph presented
the author with a complimentary copy of the 1900
Pharmacopœia.]

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tion of a belladonna plaster that is exceedingly popular, as well as having a professional reputation. Johnson and Johnson, New Brunswick, U. S. A., now use more than 150,000 pounds of belladonna yearly in the making of plasters.

BENZOINUM

Benzoinum (from *Styrax benzoin*), curiously enough escaped the attention of the Greeks and Romans, nor, so far as is known, did those energetic traders of the tenth to the thirteenth centuries, the Arabians and Persians, carry it to China. Ibn Batuta (333a) 1325-49, mentions "Java frankincense," which under the Arabian name became corrupted into *Banjawi*, *Benjui*, *Benzui*, *Benzoë*, *Benzoin*, and finally even *Benjamin*. After a hundred years the sultan of Egypt, Melech Elmaydi, sent it to the doge of Venice among other presents, and in 1490 a second doge of Venice was presented with a larger amount by the same sultan of Egypt. Considered still a precious balsam, in 1476 Caterina Cornaro, queen of Cyprus, received from Egypt 15 pounds of "Benzui." Thence travelers in Siam and the Malabar Coast, Venetian traders, and others, gave it due consideration, during and after which time it became regularly imported into Europe. Being submitted to dry distillation in rude paper cones over a pan, the condensed distillate, or flowers, under the name of *Flores Benzoës*, in the 17th century, gave origin to the now familiar Benzoic Acid. Thus from the empiricism of the past this grateful flavoring agent and preservative was introduced to the medicine and pharmacy of to-day.

BERBERIS

The berberis officially recorded in the Pharmacopeia of the United States, (*Berberis aquifolium*, or mahonia), was introduced to medicine by Dr. Bundy, an Eclectic physician of California, who brought it to the attention of physicians (467) through the manufacturing establishment of Parke, Davis and Company, of Detroit, Michigan. This variety had previously been used throughout the Western States as a domestic remedy in the direction commended by Dr. Bundy, and in many respects it paralleled the domestic and official uses of its near relatives in the Orient and elsewhere.

The Pharmacopeia of India recognizes three species of barberry under the common name berberis. These species of barberry have domestic records as tonics dating from the earliest times, being used in decoction or infusion in inflammatory discharges, as well as in applications for various forms of ophthalmic inflammation. The Arabian physicians employed this plant. Dioscorides (194), Pliny (514), Celsus (136), Galen (254a), and others recognized it. It was one of the Indian drugs on which the Alexandrians levied duty, A. D. 176-180. Among Greek antiquities are preserved small vases of barberry, showing its value in ancient times. A certain Heraclides of Tarentum is mentioned by Celsus as having a reputation for treating diseases of the eye, and among the vases of barberry above referred to, is one bearing the label of this person. In formulas for eye diseases given by Galen

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(254a), barberry is authoritatively recognized. The natives of India use an extract made from various species growing in Northern India, this extract being sold in the bazaars under the name Rusot, and used not only in affections of the eye, but as a tonic and febrifuge. The qualities of both the official drug and its foreign relatives are similar and were introduced by the common people.

BUCHU

The Hottentots of the Cape of Good Hope used the leaves of the Buchu plant (*Barosma betulina*) as a domestic remedy, and from them the colonists of the Cape of Good Hope derived their information concerning it. Reece (540) and Company, London, 1821, first imported it and introduced it to pharmacy and to the medical profession, where, as well as in private formulæ and domestic practice, it has ever since enjoyed more or less notoriety. Perhaps no "patent" American medicine has ever enjoyed greater notoriety than, about 1860, did the decoction of the leaves under the term "Helmbold's Buchu," which, a weak alcoholic decoction, commanded one dollar for a six-ounce vial, and sold in car-load lots. During the crusade of this preparation the medical profession of America, probably inspired by the press comments, prescribed buchu very freely. It is still in demand and is still favored as a constituent of remedies recommended to the laity.

CALAMUS

The use of Calamus, *Acorus calamus*, in the domestic medication of India, is recorded from the very earliest times. It is sold commonly in the bazaars, and Ainslie (7) in his *Materia Medica of Hindoostan*, 1813, states that in consequence of its great value in the bowel complaints of children, a severe penalty was placed on the refusal of any druggist to open his door in the night to sell calamus, when demanded. The antiquity of its use is shown from the fact that it was one of the constituents of the ointment Moses was commanded to make for use in the Tabernacle, (Ex. xxx), while the prophet Ezekiel says of the commerce of Tyre, "Bright iron, cassia, and calamus were in thy market." Theophrastus (633) mentions calamus, and Celsus (136), nearly two thousand years ago, refers to it as a drug from India. In the sixteenth century Amatus Lusitanus (16a) reports it as imported into Venice, and in 1692 Rheede (547) figures it as an Indian plant under the name *Vacha*, the same name being still applied to it on the Malabar Coast. From its tropical home calamus has spread until it is now found in all temperate climates suitable for its growth, the market supply coming mainly from Southern Russia, through Germany. The therapeutic use of calamus in pharmacy and licensed medicine is, as with other like substances, a gift of empiricism founded in the far distant past.

CALENDULA

Marigold, *Calendula officinalis*, has been known, practically, from the beginning of documentary records in scientific or medicinal lines.