

the use of these drugs. At the end of the first quarter of the Twentieth Century, a writer (Sajous) frankly states that the many therapeutic properties that had been credited to Belladonna have been sustained by modern research. It holds a more exalted position than ever before in the history of medicine. In part, this has been due to the growth of scientific pharmacology, and in another part to the achievement of discovering the "vital principles" of the ancients—the alkaloids of modern pharmacy.

The three monographs here outlined consist of a few "leaves" from the history of Belladonna, covering, in part, two centuries and carrying it toward the opening of the Nineteenth. Each of the writers made material additions to the knowledge of Belladonna. Faber classified and systematized the records which had been put down and added his own far-reaching observations. Sickels gave a view of the drug as it appeared in his own age. Daries, through original research, opened the door which led to the production of the alkaloidal principles which have proven of such great value to mankind. To these three writers we may well accord due honor.

A modern writer has stated that "in respect to Belladonna, much has been written, much forgotten, but about it really little is known." What the future may have in store cannot be foretold. There is nothing to indicate that the usefulness of Belladonna and allied drugs will not continue. More than ever before, their place is firmly fixed among the most important drugs in our *materia medica*, and they are well worthy of the studious labor that has been bestowed upon them.

THE NEW MEDICINAL PLANT AND VOLATILE OIL PRODUCTION LABORATORY OF THE DIVISION OF DRUG AND RELATED PLANTS, U. S. DEPARTMENT OF AGRICULTURE.

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The Division of Drug and Related Plants of the Bureau of Plant Industry, U. S. Department of Agriculture, has for many years conducted investigations on the production of plants yielding medicinal products and volatile and fixed oils at the Department's experiment farm near Rosslyn, Va., across the river from Washington, D. C. The main objective of these investigations has been to determine the cultural requirements of such plants and to study the quantity and quality of their products, with special consideration to the possibilities of such plants as commercial crops in this country. In the prosecution of this work it is necessary to maintain a laboratory at the farm to handle the crops produced in connection with the field experiments, including the drying of seed and herb, the grinding of the herb, the distillation of the volatile oils, and various other operations that are usually associated with such investigations.

The organization of this work began in 1902, but it was not until 1907 that it was permanently located on the Department farm in approximately its present location. A lath structure for partial shade was provided and numerous species of medicinal interest were placed under cultivation. About six years later a permanent exhibition garden with 39 beds was laid out and this has been maintained without interruption up to the present time. In recent years an area of approximately two acres has been devoted to the cultural experiments. Some plants that show par-

ticular promise are grown in sufficient areas to give reasonably reliable indications regarding yields and to furnish ample material for study, while the majority of species are grown only in single rows or in the exhibition beds. Concerning the latter, continuous performance records have been kept, and with respect to many such species cultural observations over a period of three decades will soon be available.

When the work was located at the farm in 1907, laboratory space was provided in a new building consisting of a one story and basement frame structure. The

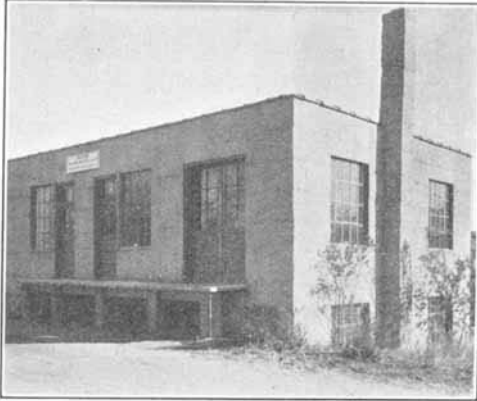


Fig. 1.—General view of the building.



Fig. 2.—Distilling room.

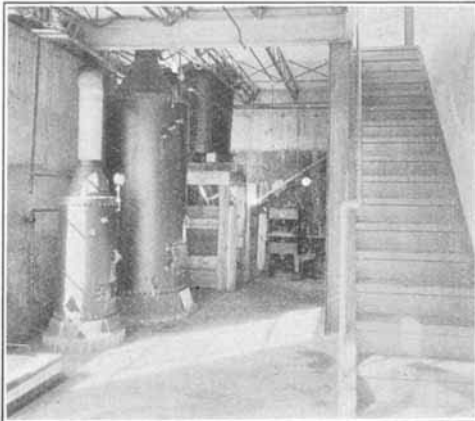


Fig. 3.—Boiler room.

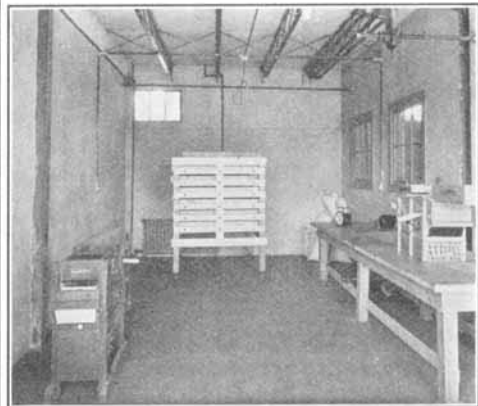


Fig. 4.—General drying and seed cleaning room.

nature of its construction made it a haven for rats, and made it impossible to keep the laboratory quarters clean. Under such conditions the work was carried on until 1930, when the entire building with its contents was destroyed by fire. On the same site there has been erected a new, modern, fireproof building, designed to meet the particular requirements of the work. The Division of Drug and Related Plants occupies approximately one-half of this building, the remainder being used for general farm purposes. Practically all new equipment has been installed, such

as grinding mills, volatile oil stills, etc., and many new features have been provided. The completion of this new and attractive workshop marks the twenty-fifth anniversary of the establishment of this line of work at the farm. It is entirely fitting, therefore, that a brief description of it by word and picture be given.

The building is constructed of poured concrete with cement floors, metal window frames and steel ceiling and floor joists. It is built on a side hill which permits convenient entrance to the main floor from one side and provides a ground level entrance to the basement from the opposite side, as indicated in Fig. 1. The small door shown at the left leads into a general storeroom, while that on the right is the entrance to the office. At the rear of the office is a small room with shelves and cabinets for storing the seed supply. The end room on the same floor adjoining the office on the right is the distilling room (Fig. 2). Double sliding doors and a loading platform at floor level make it convenient to deliver material for distillation and to remove the waste.

The distilling room is equipped with three stills. The large still in the front corner has a capacity of about 500 pounds of fresh herb. It is constructed of boiler plate and is mounted on a rack in the basement with the opening about a foot above the floor to facilitate charging and unloading. A chain hoist is used to lift the heavy top and to pull out the exhausted charge, usually in two batches. The two smaller stills are constructed of copper, tin-lined throughout, and connect with a vertical, tubular, copper condenser of which all parts coming in contact with the distillate are tin-lined. One of these stills is 18 × 28 inches with a capacity of 30 gallons, while the other is 22 × 40 inches and holds 65 gallons. Both are mounted on trunnions so that they can be tipped forward for discharging spent material into the small platform truck.



Fig. 5.—Mill room.

On the ground floor, below the distilling room, is the boiler room (Fig. 3). Two boilers, of 2 and 14 horsepower, are available for the operation of the stills. In the lower corner is shown a steam soil sterilizer, and in the rear is a hydraulic press used in connection with investigations on oil seeds.

Adjoining the boiler room on the right, and communicating with it, is a general workroom for various operations, such as drying herb, cleaning seed, etc. (Fig. 4). The movable rack holds six wire-bottomed drying trays. This rack can be pushed through double doors out into the yard for drying material in the sun if desired. The machine at the left is known as a dockage kicker. It is used extensively in grain elevators and has been found most useful for separating seed from chaff, especially seed of light weight that cannot be cleaned with a blower. A small fanning mill on the table is also used for cleaning seed. With these two machines on hand it has been found possible to clean satisfactorily practically all the types

of seed produced in the experimental plots. It is planned to install a steam-heated dryer equipped with a blower at the rear of this room.

The mill room shown in Fig. 5 adjoins the room just described. Here all the grinding equipment is located. This consists of a powerful chopper or disintegrator at the right, a small mill for finer grinding at the left, and two pebble mills, a large one in the corner and a small two-jar type on the table. The pebble mills are driven by the small motor mounted on the bench in the adjoining room.

The general arrangement of the rooms and equipment has been found very satisfactory, although changes will no doubt be made from time to time and new ideas introduced to meet changing requirements. To those engaged in similar work the Division of Drug and Related Plants extends an invitation to visit this new laboratory.

Sir Henry Wellcome has favored us with Press reports of the Ceremony of the laying of the Corner Stone of the new Wellcome Research Institution on November 25, 1931. Also an illustrated booklet of the Ceremony and description of the various laboratories and museums which are housed in the new building, which will be completed by the end of this year.

Dr. Frederick B. Kilmer has favored us with a memorial booklet entitled "Annie Kilburn Kilmer"—extracted from newspaper notices. Mrs. Kilmer died January 1st of this year. She was the wife of our fellow-member and the mother of Joyce Kilmer, internationally known by the poem "Trees," for which the mother had composed the music.



Private office and part of library, Lascoff Pharmacy, New York City.