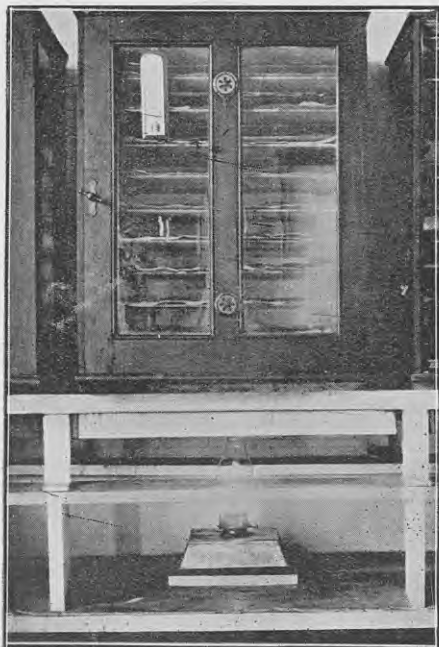


When received the samples are given a distinguishing laboratory number. The name of the seed, distinguishing-mark, name of sender, &c., are entered on special record-cards. The date on which the sample is placed to germinate is entered, also the various days on which counts are to be made. The card is then placed in an index of days of the month, so that all cards of a certain date are together, which constitutes the day's counting. The card system of recording is advantageous not only in ensuring uniformity in periods of counting, but also as forming a permanent record of results.

Process of Germination.

The germinating medium is provided by coarse felt—the under-felt—which is placed on asbestos trays, each tray holding twelve samples. The felt is well sterilized by boiling before being used, and is surmounted by two plies of blotting-paper.

The sample is well mixed and poured out on a sheet of plain paper, which is laid on a counting-board. From a portion of the sample a hundred seeds are counted (as they come) and spread out on the germinating-tray alongside the corresponding sample number. From a further portion of the sample a similar hundred seeds are counted and placed beside a corresponding duplicate number on a separate tray. Each sample is covered by a 3 in. watch-glass, which is raised on one side by a strip of cork to admit of free ventilation. The trays are then placed in the germinator. It will be noted that each test is conducted in duplicate, the duplicate being taken from a different portion of the sample, placed on a separate tray, and each tray placed in a separate germinator.



ONE OF THE GERMINATORS.

Germination of all seeds, with the exception of paspalum, cereals, and prairie-grass, are conducted at a temperature alternating from 85° F. to 65° F.: 85° for eight hours and then let fall to 65° for the remaining period of sixteen hours. Paspalum is germinated in a special oven between temperatures alternating from 75° to 95°. Cereals and prairie-grass are germinated at ordinary room temperatures. Peas, tares, &c., are soaked in water for sixteen hours before being placed on felts to germinate.