tomic abnormalities encountered were in the central nervous system. Degenerative changes in the neurones of the hippocampal gyrus were constant in all of the sections from diseased animals (Fig. 1 and 2). The exact significance of the changes is difficult to evaluate. Demyelination of the postero-lateral columns of the spinal cord and patchy degeneration of neurones of the anterior horns were less constant features (Fig. 3).

Summary. Because of the inconsistency obtained in attempted passage of the etiological agent to susceptible guinea pigs, it is postulated that the etiological agent was not being passed at all. It appeared that many of the inoculations merely served to prematurely hasten an unknown etiological agent on its way, culminating in the disease pattern and the epizootic which has been described.

Conclusions. An epizootic of unknown etiology has been observed in guinea pigs. The disease was highly fatal. The symptoms and pathology were unlike any previously described disease of guinea pigs.

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A Still for the Continuous Production of Glass-Distilled Water.* (18803)

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It is frequently necessary in biological work to have a continuous supply of glass-distilled water available. The apparatus described here has proven to be entirely satisfactory for this purpose. It has been in operation in our laboratories for over a year, 24 hours a day, without a serious breakdown. During this time it has produced on the average 70 liters of glass-distilled water per day. The design is flexible and may be adapted to larger or smaller needs. The only manual labor involved in operating the still consists of filling the storage flasks and emptying the receiver flasks.

The still is shown in Fig. 1. A few features of the construction need to be emphasized. For proper operation the upper storage bottle should be tightly sealed. The condenser D on the siphon tube will condense all steam formed in this tube, thereby preventing breaking of the siphon. There should be a rapid flow of cooling water through both of the condensers. The Allihn condenser L was found to be the most efficient condenser for the purpose. The close clearance between the bulbs and the jacket produces high cooling-water velocities. The use of a Graham condenser is to be avoided due to the large back pressure produced. The vent tube on the receiver is ca 3 cm below the outlet of the condenser and leads into a drain. This is to prevent the closing of the system when the receiver is full. The outside diameter of the tubes used for the siphon and the vent system should be 8 mm. The vent on the receiver flask can either drain into the sink, or may lead to a second storage bottle. In order to prevent contamination with grease, none of the joints is greased. Glass beads or boiling stones are not required because of the even heat furnished by the heating mantle. Phosphoric acid or permanganate can be added to the boiling flask, should this be desirable. The operation of the still should be interrupted occasionally for cleaning the distilling flask. The still can be adapted to larger capacities by increasing the size of the reservoirs and the boiling flask.

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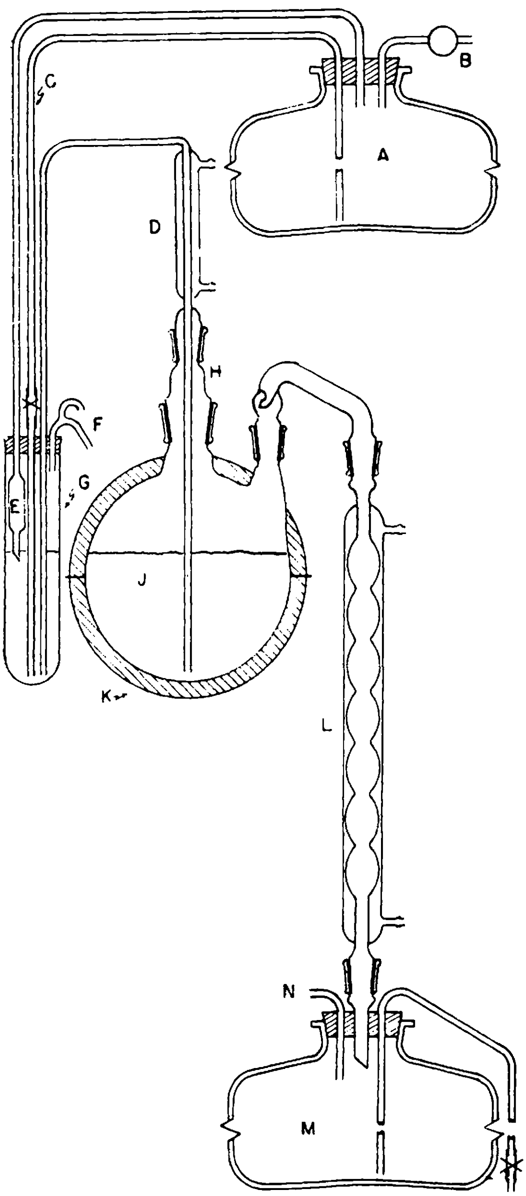

FIG. 1. All-Glass Still for Distilled Water. A: upper reservoir (12 gal); B: distilled water valve and line; C: siphon tube between upper reservoir and leveling bulb; D: condenser for siphon tube from the leveling device to the distilling flask; E: leveling bulb (should have slanted end to prevent "hang-up" in the bulb); F: overflow vent tube from leveling device; G: leveling tube; H: 55/50 to 24/40; I: adapter; J: distilling flask (12 l); K: Glascol heating mantle; L: condenser; M: receiving reservoir (12 gal); N: vent and overflow for receiving reservoir.

For the operation of the still, the following manipulations are required: (a) filling of the upper reservoir A. Close the pinch clamp on the siphon tube just above the leveling device. Open valve B to fill the reservoir A. When full, close the tap and open the pinch clamp. The boiling flask will now fill up to the level of the bottom of the leveling bulb E; (b) start the condensers; (c) start heating with the bottom mantle only. When the distillate starts coming over the top mantle can be turned on. (There is danger of cracking the distilling flask, if the top mantle is connected before the distillation has started.)

The still will now operate without supervision. Our still is so adjusted that it will distill about 38 liters of water in 15 hours. Consequently, if at the end of the working day the upper reservoir is filled and the receiver is drained, the latter one will be full at the start of the next day.

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