that either the normal pacemaker or some ectopic source is enabled to reassert its rhythmic function and thus interrupt the circus movement.

In conclusion it should be remembered that the hypothesis here given is different from, but not contradictory to the hypothesis of Lewis. Both hypotheses are valid. In fact it is probable that both mechanisms take place and so explain the two different ways in which atrial fibrillation returns to normal rhythm. We refer to the sequence with quinidin—*i.e.*, fibrillation, flutter, normal rhythm, and the sequence under digitalis of flutter, brief fibrillation, and normal rhythm.

188 (1935)

The emetic action of antimony and potassium tartrate (tartar emetic).

By SOMA WEISS and ROBERT A. HATCHER.

[From the Department of Pharmacology, Cornell Medical College, New York City.]

Tartar emetic (antimony and potassium tartrate) induces vomiting reflexly through local irritation after its introduction into the stomach or duodenum. The portion of the duodenum lying immediately below the pylorus is more sensitive than the stomach. Concentrated solutions are more active than dilute solutions in inducing this reflex.

Tartar emetic does not cause emesis in the cat or dog, when it is applied directly to the vomiting center decribed by Thumas, and which lies in the floor of the fourth ventricle.

Intravenous injections of tartar emetic induce vomiting after varying intervals of time, largely dependent on the size of the dose. This emesis is not prevented by the removal of the gastro-intestinal tract, or by the removal of the celiac plexus and simultaneous cutting of the vagi below the diaphragm, but it is profoundly influenced by cutting the vagi in the neck, or paralyzing the vagus endings with atropin; it is apparently abolished by severing all nervous connection between the heart and centers by removal of the stellate ganglia and cutting the vagi in the neck, in the cat.

The investigation is being continued.

189 (**1936**)

The effect of thyroidectomy in two sittings upon depancreatized, non-glycosuric, but hyperglycemic dogs.

By G. A. FRIEDMAN and J. GOTTESMAN.

[From the Department of Clinical Pathology, College of Physicians and Surgeons, Columbia University, New York City.]

Dogs almost always show an increase in bloodsugar contents from removal of comparatively small amounts of pancreatic tissue. Of six dogs in whom hyperglycemia without glycosuria became manifest after partial pancreatectomy, in two the right lobe was removed first and at a later date lobectomy on the other side followed. In three hyperglycemic dogs the right lobe was completely removed, but while performing the lobectomy on the left side a tiny piece of thyroid tissue was left in connection with the superior parathyroid. In one dog both lobes were removed at the same time. In all of them three parathyroids were left in situ.

In the completely thyroidectomized diabetic dog the bloodsugar became normal on the day following the last operation. On the third day tetany developed which was kept in check by intravenous injections of calcium lactate. The bloodsugar had remained normal. On the fifth day a severe attack of tetany developed. Calcium lactate injections were not tried and the animal died.

The results of these experiments are in accord with those previously reported: one-sided lobectomy does not check hyperglycemia, neither does partial ligation in glycosuric dogs. Complete thyroidectomy in the hyperglycemic dog brought the bloodsugar to normal as the same procedure in glycosuric dogs when tetany did not ensue or when it was checked by calcium lactate.

Some new points were brought out in those dogs in whom at a second lobectomy a minute fragment of thyroid tissue was left.