below the point must be primarily physiological in character, due to the irritation caused by the mucus, sand or small stones in the gall-bladder and duct.

The observations of Cannon and Blake which show that there is a physiological mixing process which takes place in the duodenum is extremely interesting in connection with this particular class of cases. Continued attention to these cases is likely to develop facts which will have great interest for the clinician.

Another condition of clinical interest has been observed in a considerable number of cases. It has been found that many cases of gastric ulcer have previously suffered from chronic, recurrent, or catarrhal appendicitis, usually with peritoneal adhesions to the appendix, or the cecum, or both, or with fecal concretions in the appendix; but always with some form of obstruction to the passage of gas. This pathological obstruction has resulted in a physiological obstruction to the passage of gastro-intestinal contents through the pylorus, and this in turn had been the exciting cause of the gastric ulcer.

Clinically one can usually follow a very interesting sequence in cases of gastric ulcer which do not end abruptly by perforation or fatal hemorrhage, or by what is probably less frequent in cases in which the ulcer is at all advanced, by permanent healing.

At this point, however, I believe that it is proper to express the opinion that it seems most likely that a very large number of small ulcers heal so perfectly that it is quite impossible to demonstrate their existence either ante-mortem or post-mortem, and that there are few cases which go beyond this initial stage without healing which will later heal permanently.

Vicious Circle in the Development of Gastric Ulcer.—It is not uncommon to observe the following history in the development of gastric ulcer:

1st. There is severe pain two to four cm. below the ensiform cartilage in the median line. This may be more severe directly after eating, or only after eating certain things, or it may be most severe when the stomach is empty, and may be relieved by taking food, but its location is quite constant and the pain is increased upon pressure at this point. There is at this point no dilatation present.

2nd. In attempting to protect the ulcerated surface against traumatism there is a physiological obstruction of the pyloric sphincter. This obstruction may be increased in two ways: (*a*) There may be developed an indurated edematous area