incision, and some blood was observed to be coming from above the left edge of the liver. The liver was folded on its under surface at one part of its left margin, involving the liver for about $1\frac{1}{2}$ in. from the thin, tongue-like left edge. The liver was next displaced from the diaphragm, when a wedge of liver was observed to escape from the lips of a wound in the diaphragm, and a small wound of the liver was seen on the surface at the apex of this wedge. A finger passed into the diaphragmatic wound allowed air to enter the chest, and a few ounces of blood escaped into the abdomen. The diaphragmatic wound had fallen on the region where the muscle fibres blend with the central tendon just outside the cardiac area. The wound was about 2 in. long and extended, from within, in an outward and forward direction, into the muscle fibres. The pulse at this stage was causing the anaesthetist considerable anxiety owing to the constantly increasing pneumothorax from air being aspirated through the now unguarded diaphragmatic wound. With a hand below the diaphragm, the heart could be detected to contract feebly and irregularly. With a few manipulations of stroking compression good regular contraction was rapidly re-established. During these manipulations and the subsequent readjustment of the pads, a button of anterior wall of stomach had passed into the wound in the diaphragm and required some little traction to disengage it, as the herniated button was distended with gas. The diaphragmatic splitting had increased for about 1 in., so that the wound was now some 3 in. in length. A continuous buttonhole suture of catgut was introduced extending beyond either end of the diaphragmatic wound, passed through the whole thickness of the diaphragm and including half an inch of tissue on each side of the wound. This controlled some haemorrhage which had been going on from vessels in the edge of the diaphragmatic wound, very satisfactorily. The small wound of the liver was not bleeding and required no treatment. The abdominal incisions were then closed without drainage. The small stab wound in the thorax was excised by an elliptical incision and the thoracic fistula closed. The chest was then aspirated while pressure was applied to the chest wall to re-constitute the negative pressure in the pleural cavity and to balloon the lung.

Convalescence was uninterrupted and complete. Respiration was never more than 30 per minute after the first twelve hours following the operation. The wounds were dressed upon the tenth day and the stitches were removed, no subsequent dressing being necessary. The patient was discharged to resume his work, as a "tapping" coolie on a rubber estate, on the nineteenth day after the operation.

Eighteen months after the operation the manager informed me that the coolie had been in full work ever since he returned to the estate.

Conclusions.

The practical points of interest in these cases are:

CASE I.—The immediate improvement in the then alarming condition of the respiration and pulse by fixing the mediastinum with traction upon the lung. The splendid exposure, and comparatively easy suturing of the diaphragm and liver, got by the π -shaped flaps in the chest wall. The loss of the patient through deficient functioning lung tissue.

CASE II.—1. The splendid exposure of the diaphragm, with efficient room for suture manipulations, through the oblique subcostal incision.

2. The mechanism observed in the production of diaphragmatic hernia.

3. The powerful stimulating effect of heart massage observed and the lasting benefit thereof.

4. The great benefit to respiration by reconstituting the negative pressure in the chest, and the marked contrast in the respiratory comfort throughout convalescence contrasted with that of the patient in Case I, where a pneumothorax was left to be absorbed.

SENATOR J. W. DANIEL, of St. John, New Brunswick, has been elected President of the Canadian Association for the Prevention of Tuberculosis, in succession to the late Colonel J. H. Burland, who died recently in London. This year the annual meeting will take place in Vancouver on July 5th next.

A METHOD FOR THE BACTERIOLOGICAL EXAMINATION OF THE NASO-PHARYNX IN EPIDEMIC CEREBRO- SPINAL MENINGITIS CONTACTS.

BY

WALTER H. FEARIS,

BACTERIOLOGIST TO THE CARDIFF AND COUNTY OF GLAMORGAN PUBLIC
HEALTH LABORATORY; FORMERLY SPECIAL LECTURER ON
BACTERIOLOGY, KING'S COLLEGE, UNIVERSITY
OF LONDON.

It is well known that the upper part of the naso-pharynx offers conditions favourable for the growth of the meningococcus of Weichselbaum. In the control of epidemic cerebro-spinal meningitis the value of the bacteriological examination of the naso-pharynx of "contacts" depends largely on the efficiency of the apparatus used for obtaining a "swab" from the region referred to. The apparatus should fulfil the following conditions: (1) it should enable the swab to be taken free from contamination by the bacteria of the mouth and the fauces; (2) it should avoid all risk of injury to the naso-pharynx; (3) the effective area of the surface of the swab which actually comes into contact with the naso-pharynx should readily permit itself to be smeared over the surface of the culture medium, such as nasgar, in a Petri dish. The instrument here described fulfils these conditions.

The essential part of this instrument is a flexible spiral spring, *w*, to which the swab, *s*, is attached. By this arrangement the effective area of the swab can be readily brought into close but *gentle* contact with the surface of the culture medium. The spring is fitted on to a rigid wire, *h*, along which runs an adjustable safety stop, *p*. This stop is fixed before use so that the swab, *s*, can be protruded a short

distance beyond the opening, *l*, in the metal cannula, *m*. The swab, *s*, is then drawn up into the cannula, *m*, and the whole is sterilized in a metal case. The action of this safety stop in preventing injury to the naso-pharynx is obvious. In the examination of a patient the end, *l*, of the cannula is passed behind the uvula. The swab is then pushed out as far as the safety stop permits. The thumb of the right hand is placed in the ring, *r*, when the swab is being pushed forward. After the swab has been brought into close contact with the naso-pharynx, it is drawn back into the cannula, and the instrument is removed from the patient's mouth. As soon as possible, the safety stop, *p*, should be unscrewed; then the swab is pushed out well beyond *l* and is smeared over the surface of a Petri dish of nasgar, the curved part of the cannula, *m*, being turned downwards. A second Petri dish of nasgar is inoculated by means of a sterile, *L*-shaped, glass rod, the shorter arm of which has been smeared over the first dish. The two Petri dishes are placed in the warm incubator (37° C.) and examined in due course.

The instrument has been constructed for the writer by Mr. A. W. Staniforth, surgical instrument maker, 6, Church Street, Cardiff.

On April 29th and 30th the new buildings of the Washington University Medical School in St. Louis were formally opened. Addresses were delivered by the Dean, Dr. Opie, Dr. William H. Welch, President Lowell of Harvard, President Vincent of the University of Minnesota, and Dr. Simon Flexner. The cost of the new buildings, including the hospitals, is given as £600,000. One of the most interesting features of the ceremony was the presentation to the Washington University Medical School of a number of manuscripts and papers of William Beaumont, among them being the original notes of his experiments on Alexis St. Martin. A room has been set aside for the housing of these manuscripts in the library of the medical school.