A NEW FORM OF MERCURY SPHYGMOMETER.

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WHILE engaged recently in an investigation of the equality or difference of pressure in the arm and leg arteries—an investigation which showed a marked difference in all cases of aortic regurgitation—I contrived a new and convenient form of mercury sphygmometer. This mercury manometer consists of a single tube, the lower end of which is sealed into a small reservoir, and opens near the bottom of this, as is shown in the enlarged figure of this

part of the instrument. The armlet tube is attached to the end of the glass tube, which is also sealed into the reservoir, and opens into the upper part by a capillary opening. A small quantity of mercury is introduced into the reservoir. When the pressure is increased air is forced into the reservoir, and the mercury is driven up the manometer, and registers the pressure on a scale in millimetres of mercury. The slight fall of the mercury in the reservoir is taken count of in the graduation of the scale.

When in use the manometer is fastened to the wooden thermometer case in which it is carried by a rubber ring, and a simple little brass foot is screwed on the end of the case, and supports it in the vertical position. The brass foot folds up, and goes into the case beside the manometer.

The advantages of the instrument are:

1. A single tube; this halves the errors of reading the ordinary double-tube manometer.
2. Owing to the capillary opening, the mercury does not spill. No rubber caps are required to close the manometer, and it can be carried in its case in any position.
3. Portability. No box is required; the wooden case, armlet, and bulb can be thrown into a handbag, and thus carried conveniently.

Mr. Hicks, of 8, Hatton Garden, made the instrument for me.

REFERENCE.

¹ *Heart*, No. 1, 1909.

THE Society of Laundry Engineers is arranging to hold an exhibition at the Royal Agricultural Hall, London, in April next, to illustrate the advances made in laundry machinery, and in the equipment of public baths and similar institutions.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CARCINOMA IN THE MALE BREAST.

ON March 29th, 1906, a labourer, aged 57, consulted me as to a tumour, about the size of a marble, in the left breast. He complained of no pain, and the tumour caused him no discomfort, but, as he was then under treatment for a broken arm, and for that reason incapacitated from work, I removed the tumour under a local anaesthetic. It appeared to be an ordinary fibro-adenoma; no glands were to be felt. No microscopical examination was made, and I confess that the possibility of the growth being malignant never crossed my mind. In October, 1909, three and a half years or so after the operation, he consulted me again about the same breast. I found another tumour, about the size of a pigeon's egg. The skin over it was red, oedematous, acutely tender, and adherent. The patient attributed this to friction from his clothes, and under hot fomentations the redness and oedema rapidly disappeared. In the axilla one movable tender gland could be felt. The history was that for the first six months or so after the operation all went well, but he then noticed that the lump was recurring. He, however, continued his work for two and a half years, and it was not until the breast had become acutely painful that he consulted me again. During these intervening years he says he lost about 2 st. in weight, but only latterly had he felt really unfit for work. He was a big, powerful man, and there was not much obvious wasting. Bearing in mind the fact that the tumour had recurred, that it was adherent to the skin and immobile, that one gland could be felt in the axilla, and that the patient said he had lost 2 st. in weight, my suspicions were aroused that the tumour might be malignant. On the other hand, the rarity of carcinoma in the male breast, the length of time—two and a half years—that the tumour had been growing, its comparative smallness, and the fact that all the symptoms, with the possible exception of the loss of weight, might be due to an inflamed fibro-adenoma or other innocent growth, made the diagnosis, in my opinion, indefinite. I removed the tumour widely, and all its surroundings, but, in view of its doubtful nature, did not feel justified in doing more. The Clinical Research Association reported as follows:

This tumour is a carcinoma composed of epithelial masses in a fibrous stroma. Its general character is that of a scirrhus. It infiltrates all adjacent tissues, but does not actually invade the underlying muscle.

The wound soon healed, and I advised the patient to submit to what I trust will be the last operation, when both pectorals were removed and part of the serratus and rectus muscles, the supraclavicular fossa was explored, but no glands could be found, and the axilla (where was a large mass of glands) was cleared out. The report on specimens of the breast and gland was as follows:

Small Pieces.—Two hard fibrous masses connected by loose tissue. Sections cut of both pieces, and both show dense fibrous tissue with numerous collections of small round inflammatory cells. Also many connective tissue cells containing blood pigment. No new growth is to be seen.

Gland.—This shows typical carcinoma. The cells are contained in well-marked alveoli, and are spheroidal for the most part.

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TICK FEVER IN NYASALAND.

REFERRING to a memorandum by Dr. Hearsey on Tick Fever in Nyasaland (October 2nd, 1909, p. 986), I think it well to record its prevalence in the neighbouring district of North-Eastern Rhodesia.

In this small hospital, out of 120 in-patients for one year there were 35 cases of tick fever microscopically diagnosed. Many of these came from travelling caravans from all the surrounding districts. There were three fatal cases, one on the day of admission, which was the third day of the fever; one on the first day of the illness, without rise of temperature, though spirochaetes were very numerous and even in tangles; and one on the fourth day of fever in spite of all treatment.