This is, of course, a rough and ready way, but in accurate work much experience in examining microscopically the bacteria will be necessary. If anyone wants examinations made they can have them done at the Oxygen Home, 35, St. George's Square, Pimlico, London, S.W.

We have gone some two steps further still. We have cultivated what we call favourable micro-organisms in pure air, pure oxygen and varying strengths of oxygen, and find that the favourable micro-organisms grow best and stain easiest after cultivation in from 25 to 50 per cent. of pure oxygen mixed with purified air. It is found in practice that a solution as strong as 75 per cent. of pure oxygen, mixed with pure air, is too stimulating for any ordinary cases, and that with a weaker solution wounds heal better. There are thus two elements to be taken into consideration in regulating the quantity of oxygen to be used:

1. The condition and behaviour of the micro-organisms, favourable and unfavourable when cultivated on agar.
2. The condition and behaviour of the micro-organisms, favourable or unfavourable, when growing on a wounded or ulcerated surface.

Secondly we have taken the case of W. Here the hand was healing with great rapidity and the leg slowly. We took some of the pure staphylococcus albus and aureus from the hand and inoculated the leg. This produced the best results, and the leg improved rapidly. We repeated this treatment in three other cases with the most satisfactory results, but as we cannot, owing to want of space, give the detailed account of them, we only mention the fact.

We have further cultivated the unfavourable micro-organisms in atmospheres varying from air to pure oxygen, and we have found that in air they flourish, but in oxygen their vitality and size diminish as the amount of the oxygen in the mixture is increased, and when 50 per cent. of pure oxygen is used with 50 per cent. of purified air—that is, O=60 and N=40—they begin to die off.

A CASE OF LOBAR PNEUMONIA, WITH A HYPERPYREXIAL TEMPERATURE OF 109° F: RECOVERY.

By J. KYNASTON COUCH, M.R.C.S., L.R.C.P.,
Assistant Surgeon, Swansea General and Eye Hospital.

CASES of very extreme hyperpyrexia where, however, the issue is a favourable one, are sufficiently rare to justify the following case being recorded with some detail.

M. J., aged 3, had been in her usual good health until June 4th, 1896; on the afternoon of that day she was seized with numerous slight rigors, and her temperature rose to 102° F.; but she showed no other signs of ill health. The next morning the temperature was 101.5° F.; the child by no means seemed ill, and nothing abnormal could be detected on examination of the thorax and abdomen. During that day, however, she rapidly grew worse, and when I saw her again about 9 P.M. she was delirious and very restless; the skin was dry and burning to the touch, pulse 180, respirations 60; there was complete anorexia, but no cough or pain, and nothing abnormal could be found in the thorax or abdomen. The thermometer placed in the axilla, and kept there quietly by gently pressing the child's arm against her side, registered 109° F.; this observation was repeated with precisely the same result. The child was immediately put into a tepid bath for ten minutes, and then enveloped in a tepid wet pack for four hours; 3 grains of antipyrin were given thrice at half-hourly intervals. Whilst in the pack and afterwards the child had several quiet sleeps.

The next morning (June 6th) the temperature had fallen to 104° F., and the patient was evidently not so acutely ill as on the previous evening. She had now developed a frequent short dry cough, and on physical examination of the thorax there was diminished percussion resonance, with faint yet quite distinct bronchial (or tubular, according to the nomenclature adopted) breath sounds over a small area, about the size of a four-shilling piece, situated near the centre of the vertebral border of the right scapula. There were no moist sounds, either intra- or extra-pulmonary. There was no rash

and no sore throat; vomiting, convulsions, squinting, irregularity or inactivity of the pupils were all absent, and no *tâche cérébrale* could be obtained. The child did not appear to have any pain, and, though frequently delirious, the degree of delirium scarcely corresponded with the pyrexia. The temperature that evening only rose to 104.2°, but the pulse was beginning to be running and thready, and the general condition was not so good. Dr. Le Cronier Lancaster saw the child in consultation with me. She was given a mixture containing digitalis, ammonium carbonate, and paregoric, to have a small quantity of brandy at hourly intervals during the night, and her milk to be peptonised.