

stretch" may be doubtless true in the case of spasmodic asthma or in hypertrophous emphysema, where the pulmonary suction is abolished or nearly so, but in normal breathing, matters are precisely the reverse, as herein, instead of the inspiratory muscles acting to tone up the pulmonary fibres, their action is directed towards overcoming this tonus. It is only when a relaxation of lung occurs to such an extent as to pass the indifferent point that the inspiratory muscles are necessarily called into play in the direction of "toning up" the lung fibres. It was certainly the original view, as propounded by Hutchinson,¹ that the inspiratory muscles acted in the normal respiration not only in overcoming the elastic resistance of the lungs but also a resistance on the part of the chest walls. But some time afterwards Salter² made the important observation above referred to on the elastic recoil of the chest wall following post-mortem puncture of the pleura, and this resiliency was accurately estimated subsequently in a number of very careful experiments by Sir R. Douglas Powell.³ When, therefore, Dr. Campbell makes the general assertion that "any enlargement of the chest is chiefly brought about by the inspiratory muscles," he fails to appreciate that enlargement (up to a certain point) which is brought about by the reserve recoil of the chest walls.

As regards the lung reflex, once it be proved that bronchial (and therefore pulmonary) dilatation can be induced by stimuli applied to the chest wall or otherwise, it is a matter of secondary consequence how far the inspiratory muscles thereafter contribute to the thoracic enlargement, but Dr. Campbell goes so far as to assert that the entire phenomena of the lung reflex may in fact be due to reflex excitement of the inspiratory muscles themselves. Now, in regard to the chest generally, it is doubtless true that such a procedure as vigorous rubbing tends to induce, if not dyspnoea, at least a deeper character of the breathing. In neurotic persons this is sometimes very marked, but that this is chiefly the result of a reflex pulmonary relaxation is shown by examining the state of the lungs and comparing the same with the effect produced by simply getting the patient to draw a number of deep breaths. In the former case there is a distension of lung which persists for some time after the breathing has become quiet, whereas in the latter case the distension subsides with the breathing; in other words, the mean size of the chest is more persistently enlarged when the lung reflex is induced, and if the cutaneous stimulus be maintained for some time this expansion is correspondingly maintained. The conclusive evidence, however, as to the existence of the lung reflex of dilatation is that afforded by the application of stimuli over small areas of lung which have been invaded by collapse. If such a small area be irritated, as by spraying with ether, it will be found that the percussion note, formerly dull, will acquire some resonance, and I have observed that the same effect is frequently produced by prolonged percussion over the area. Now such an effect over a limited area, say at the base of the lung, is only susceptible of one explanation—viz., a reflex dilatation of the collapsed air cells. If the dilatation were produced by a dyspnoea involving the action of the inspiratory muscles the remaining portions of the lungs would likewise be dilated, whereas no dyspnoea is apparently produced nor are the lungs otherwise altered in volume.

As regards the reflex of dilatation which is induced by the inhalation of certain irritating vapours and which Dr. Campbell believes to be merely an effect of inspiration, it may be sufficient to point out that the reflex of dilatation can also be brought about by the oral administration or the subcutaneous injection of such drugs as atropine and hyoscine wherein inspiratory effort is wanting.

I am, Sirs, yours faithfully,

Henrietta-street, W., Oct. 24th, 1903.

A. G. AULD.

SLEEPING SICKNESS: A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—I have just learnt that I have been credited with the statement, made in certain newspapers this week, that a Liverpool student discovered the cause of sleeping sickness. *I did not make any such statement*, nor have any of the

¹ Transactions of the Royal Medical and Chirurgical Society, vol. xxix., p. 137.

² THE LANCET, August 5th, 1865, p. 141.

³ Transactions of the Royal Medical and Chirurgical Society, vol. lix., p. 165.

members of our Liverpool school ever made such a statement. We have not sent any expeditions from Liverpool to the sleeping-sickness area with the exception of the expedition very recently sent to the Congo. I would be much obliged if you could give publicity to this statement.

I am, Sirs, yours faithfully,

University of Liverpool, Oct. 23rd, 1903.

RUBERT BOYCE.

THE UNIVERSITIES' MISSION TO CENTRAL AFRICA.

To the Editors of THE LANCET.

SIRS,—I have been asked on behalf of the Bishop of Zanzibar (the Right Rev. J. E. Hine, M.D.) to make known the great need that exists in his diocese for the services of a fully qualified medical practitioner. In a letter received within the last few weeks the Bishop writes:—

After completing a visit of some duration in the Magila archdeaconry I see more clearly than before what an opening there is here for a doctor and what a useful work he could do in this part of the country. Wherever I go, whether to Msalabani, or Kologwe, or into the interior, I have people coming to me seeking medical or surgical treatment, genuine cases often of considerable scientific interest.

At Kologwe in this last week I had to do quite a succession of operations and there were other cases needing longer and careful attention which I could not, owing to lack of time, undertake with any hope of benefit to them. A resident surgeon (resident in the district I mean) would have now a considerably larger area to travel over than was the case some years ago when Dr. Ley was alive. The people all prefer to come for treatment to the mission or to the mission dispensaries rather than to go to the German Government Hospital at Tanga, excellent though it no doubt is. With our present staff of nurses there ought to be no difficulty in a competent man undertaking cases of the gravest nature. In the Likoma diocese I had the valuable help of Dr. R. Howard and his work, I hear, is always increasing as the people on the lake shores get to understand and to value the skilled treatment they receive at his hands. We want another Dr. Howard here at Magila; he would find plenty to do and possibly a good deal to investigate of scientific interest, as well as very practically helping the work of the mission. Such a doctor must, of course, be one in thorough sympathy with the church work that is carried on in the country and he should have to some degree the missionary vocation himself, though he would not be required to do anything else except to pursue his own particular calling.

There is also the health of the European staff to be considered. That, too, requires a resident doctor, so that in severe cases it may not again be necessary to cable to Zanzibar for assistance or to send down to Tanga on the possible chance of being able to call in the German doctor who is sometimes to be found there. If those who are in touch with hospitals or with young surgeons recently qualified could bring this want before them it is not unlikely that someone might be found who would be willing to offer himself for the work.

I should be most glad to give further and more detailed information to any who may desire it.

OSWALD A. BROWNE, M.D. Lond.,

Member of the Medical Board of the Universities' Mission to Central Africa.

9, Dartmouth-street, Westminster, S.W., Oct. 26th, 1903.

SMALL-POX IN TASMANIA.

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of Oct. 17th, p. 1132, a paragraph headed "Small-pox in Tasmania." I may mention that the outbreak to which you refer was confined entirely to the city of Launceston. It has now been altogether stamped out. I have been advised by cable that the last case of small-pox occurred on Sept. 3rd and that the quarantine restrictions which had existed for a short time in Australasia against Tasmania have now been removed. As this subject may interest some of your readers I shall esteem it a favour if you will kindly insert the above information in your next issue.

I am, Sirs, yours faithfully,

ALFRED DOBSON,

Agent-General.

Victoria-street, Westminster, S.W., Oct. 22nd, 1903.

PROPOSED MEMORIAL TO THE NURSES WHO DIED ON ACTIVE SERVICE IN THE SOUTH AFRICAN WAR.

To the Editors of THE LANCET.

SIRS,—Nearly two years have elapsed since the conclusion of the war in South Africa and a duty still remains to be fulfilled which we venture to commend to the generous sympathy of the whole nation. While all honour has been accorded to the nurses who have returned from active service and acknowledgment has been made of the value of their work by the award of orders and decorations, nothing has been done to express the nation's appreciation of the devotion