special knowledge of tropical diseases would give me the benefit of their opinion on the matter.

Three men started on Jan. 1st to come into Bulawayo from Fort Filabusi, ninety-six miles distant. The journey occupied nine days and although the weather was mostly wet still there were fine days and on such occasions two of the men bathed on every opportunity but the third man abstained from so doing. During the journey they always slept on the open veld (field) at night but were well covered up, although at the Fort it was not unusual for them to sleep with very scanty clothing on. Of the three men who came in one presented himself to me on Jan. 22nd. He stated that on Jan. 20th, when undressed he noticed little red spots scattered over the sides of his chest and putting his hands round beneath his armpits he could feel other and larger pimples on his back. On the 21st the spots caused a great deal of irritation, with pain of a sawing nature, and on the 22nd I saw the patient for the first time. I found that he had scattered over both sides of his trunk a number of what at the time I considered to be boils, which very closely resembled the boils seen at the nape of the neck in many people. A few of these spots were also to be seen in the middle of the back, one on the buttock, and one on the thigh, but the limbs with this exception and the face were free. I told the man to bathe the boils with hot water and squeeze the contents out, and I ordered him some red oxide of mercury ointment. Soon after the patient had left the building one of the hospital orderlies brought me a small worm which he alleged he had squeezed out of one of these spots. When the man presented himself again on the

A semi-diagrammatic representation of the parasite under the microscope, $\frac{1}{8}$ in. objective.

24th I admitted him and on the 25th I examined these spots closely. They were hard, deep-red in colour, about a quarter of an inch in diameter, and stood up well above the level of the skin; at the apex of each was a small scab. On removing this scab a very small drop of cloudy fluid escaped, which under the microscope showed pus corpuscles and a few red corpuscles but nothing more. Looking now at the spot I could see a small channel blocked by a small black speck, and on gently squeezing the projection from its base upwards out slid a worm. After evacuation of this worm the spot was swabbed with perchloride of mercury solution and it gave no further trouble. The worms varied in size, but on an average they were about a third of an inch long; they were of the colour of an ordinary silkworm; one extremity, the head, was narrow and had dark marks visible through its integuments, and the other extremity was blunt and rounded. The

position of the worm in the man's skin was with the head surface-wards and the body lying in a channel extending obliquely down towards the subcutaneous tissue. The body of the worm was annulated from one end to the other and about as thick as a No. 3 gum elastic catheter. They were very energetic in their movements, crawling along like an earthworm without the aid of any feet. Within an hour of removal from the host I placed a worm on a sheet of paper and marking the position of his tail I stirred him up; he crawled exactly three-quarters of an inch in thirty seconds.

I next endeavoured to examine the worm under the microscope, but I was considerably handicapped by the want of proper appliances. However, I could make out a distinct head from which projected a sort of proboscis with a mouth surrounded by four small circles (? suckers) leading to a gullet which was bounded on each side by a dark streak, probably a blood-vessel; these dark streaks extended down until they became lost amongst coils of intestine. The coils of intestine occupied a central position and were flanked on each side throughout the length of the body by longitudinal vessels from which branches arose on both sides. But what struck one particularly were a great number of hooks scattered over the entire surface of the body. These hooks could be distinguished easily with 1 in. objective; close to the head they were arranged in two definite and closely approximated rings, further down was a second single ring, and over the body generally they were irregularly scattered, finally near the tail the ringed arrangement again obtained although somewhat imperfectly. The hooks themselves had a brown colour and under $\frac{1}{4}$ in. objective closely resembled ordinary rose thorns.

In considering the probable life-history of these worms I came to the conclusion that they were most likely a stage in a cycle and I determined to endeavour to see their further development. Accordingly I kept three healthy-looking specimens which I obtained on Jan. 25th and regularly every morning I placed them on fresh raw beef. As soon as they were so arranged they buried themselves a half of and sometimes the entire body in the meat, and would remain quite quiet until removed for their next meal; on taking them out of the meat their bowels always acted freely. I examined some of their motion and with a $\frac{1}{4}$ in. objective could distinguish nothing beyond finely-divided fat. For the first three or four days they grew rapidly, the largest attaining a length of about half an inch, but after this time they did not increase in size. I failed, however, to see the next stage in their life-history, for they all died, the last one about fourteen days after having been removed from the host. I made inquiries from mine prospectors and others and I gathered that these worms are common in dogs and Europeans in the Murchison Range of the Transvaal, Natal, and the Tuli district of Rhodesia. Native races do not seem to be affected. The general opinion was that a fly, of which I could get no reliable description, deposited worms or eggs on the skin. Some said that the "bite" of this fly was painful but others denied this. My patient had no recollection of having been bitten. Again, it is said that these flies infest water-courses, but here again evidence was contradictory. My patient certainly had bathed frequently.

The chief interest, medically, would appear to be in these cases to distinguish them from boils. I found that my method of squeezing out the worms intact and swabbing the wounds with corrosive sublimate solution gave instant relief without any further attention being necessary.

I am, Sirs, yours faithfully,

FRANK ARNOLD, M.B. Lond.,

Resident Surgeon, The Hospital, Bulawayo, Rhodesia.
Feb. 16th, 1898.

ENGLISH SANATORIUMS FOR THE TREATMENT OF PHTHISIS.

To the Editors of THE LANCET.

SIRS,—From many years' experience and practice in the Alpine climates I am convinced that such institutions as the above-named could be made to attain a large measure of success; and although the supreme advantage of mountain air would not be available in our somewhat dreary winter climate the nutritious and appetising English food would count for a great deal in the treatment of pulmonary phthisis.

It seems that of late years medical discipline has been regarded by many of those whose state of health would

gain by it as becoming rather irksome in some of the Alpine stations. In one famous hotel it is considered "bad form" to be an invalid and many are tempted to "bluff" the disease and join the festive throng. The sensible ones, however, obey their medical man and profit in consequence. There are many people now who visit the Alps for pleasure and it is rather difficult for their sick friends to refrain from participating in a life which is not only unsuited to them as invalids but taxing also to sounder constitutions. Although in most of the hotels the food placed on the table is all that can be desired it can be readily understood by English people that few establishments abroad can provide beef equal to that of the young bullocks fed on Devonshire herbage or mutton of the quality obtained from the Welsh hills, so in this respect any English sanatorium would be at an advantage; but in climatic conditions the British Isles can scarcely vie with the winter climate of the Alps either as to dryness, sunshine, or calmness of the atmosphere. On the other hand, everyone who has had continuous observation of phthisical patients is aware that strict supervision of the case is the all in all. This is scarcely so easy to attain now in every hotel of a leading Swiss health resort. The magnificent climate attracts those who come for the winter sports alone; and some hotel proprietors avow that they do not want invalids. Nevertheless, there are always plenty of the latter class located there or the hotels would not be filled as they are; but these people cheerfully and complacently consider themselves under "climatic treatment" and have a false sense of security engendered thereby. They enter with vigour into all amusements at hand—dancing, skating, tobogganing, walking, &c.—to the utmost extent of their powers. It is only the cautious *poitrinaire* who obtains full benefit of a prolonged absence from home. The ambiguous term "climatic treatment of consumption" is rather misleading and may warrant some invalids in assuming that all other treatment may be neglected to a great extent, or at any rate that the "climatic" remedy permits a maximum of enjoyment with a minimum of caution and no irksome restrictions of rest, quietude and patience anteceding the period when exercise of some kind can be prescribed with advantage.

There are assuredly many who would gladly avail themselves of some home sanatorium where, modestly speaking, two or three months' medical guidance would help to abate the feverishness and cardiac irritability so often accompanying an early deposit of tubercle in the lung; and perhaps train the patient in the way he should go afterwards, or put some flesh on him if emaciated preparatory to going abroad. Sanatoriums in England, especially during the summer months, ought to have as great a range of efficiency and utility as similar institutions established in Silesia and the Black Forest, where climate is certainly a secondary consideration, but medical supervision, diet, and hygiene of first value and importance. A not inconsiderable advantage is the mental effect produced on some patients entering an establishment devoted to one object and conducted under medical supervision which they know to be experienced in the treatment of their malady. They then appear to fall willingly into a determination to pursue the "cure" conscientiously and are saved all the officious meddling of busybodies or hotel acquaintances who, chiefly out of curiosity and want of occupation, inquire into the symptoms and offer remedies or irresponsible advice to disconcert the patient or exasperate the medical attendant.

In a well-ordered abode for receiving cases there need be no superfluous restraint or fussy, mysterious rules. For instance, one cannot see the necessity of enjoining patients to take their temperatures four times a day in the rectum as is the habit pursued in one German sanatorium. It seems to me that the daily life of a patient can be made interesting and pleasant enough without such inconvenient occupations.

I am, Sirs, yours faithfully,

Montreux, Feb. 25th, 1898.

TUCKER WISE.

"HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—As your Commissioner in his article on the above subject in THE LANCET of this week referred to me in connexion with the Bradford Children's Hospital, you will, perhaps, kindly allow me to correct some inaccuracies he has

fallen into, as well as to point out some injustices he has, in my opinion, committed. In the first place, as I have always been an ardent advocate of hospital reform I particularly feel any imputation of implication with hospital abuse. I have at no time been "principal surgeon" to the institution. I was from the foundation of the hospital fifteen years ago till last year—when I was appointed honorary consulting medical officer—one of a staff of three honorary medical officers. I was also, no doubt, for the same fifteen years its honorary secretary, a not such an unusual occurrence in a new hospital, I think, as your Commissioner imagines. The Bradford Children's Hospital's constitution was founded upon that of the best similar institutions in existence, with the important qualification that special rules were introduced (notably the rule not requiring letters of recommendation) to prevent hospital abuse. It is in no manner or shape connected with the Eye and Ear Hospital, nor were its rules at all founded on those of that institution. The fact of its employing the same collector and secretary is purely accidental and in no way affects the management. The Bradford Children's Hospital is the only hospital in the town, and one of the few in the country, that requires, and indeed issues, no "letters of recommendation." It has always acted upon its rule that "sickness, poverty, and childhood" alone qualify for admission. Out of an expenditure of £2083 last year only £62 were received from patients.

The house committee do not see parents for the purpose of "bargaining what they are to pay for the treatment of their children." The rule was adopted some years ago at my suggestion with the sole object of checking hospital abuse. The practice is as follows: Cases are admitted into the hospital upon the authority of the medical officer for the week or of the resident medical officer acting for him. Upon admission a card is sent to the parent requesting his attendance at the next house committee, when his circumstances are inquired into and if he is found to be able to afford to treat the child at home the case is discharged. If not, but still in the opinion of the committee able to pay some trifle, the charitable nature of the institution is pointed out to him and he is invited to give what he is able towards the maintenance of his child, and sums of sixpence are much commoner than those of 10s. No one is urged to give and the donation is never either given or received as payment. A large proportion are registered as unable to contribute. Personally I have always been adverse to any payments from patients, but in a commercial community some concession must be made to the commercial instinct.

Hoping to have cleared our hospital from the strictures of your Commissioner, I am, Sirs, yours faithfully,

W. GILCHRIST BURNIE,

Hon. Consulting Medical Officer to the Bradford Children's Hospital.
Bradford, March 30th, 1898.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to the article on "Hospital Abuse" in your issue of March 26th and, so far as it is written with the desire to assist in the remedies of abuses, I myself, in common with all persons interested in hospital work, approve of its intention, but with others I could wish, were it possible, that your Commissioner were able with the admonition to point an effectual remedy for the abuses to which he refers. My purpose in writing to you is merely on behalf of the Bradford Children's Hospital to correct some more or less serious inaccuracies which have crept into the statement. In the first place, it is incorrect to state that "the greater number of the in-patients are made to contribute towards their maintenance in the hospital," and again that the parents have "in fact to bargain as to what they are to pay for the treatment of their children in the hospital," and again that in appearing before the hospital committee "they must expect to be severely questioned as to their ability to pay something if the sufferer is to be admitted as an in-patient." As a matter of fact, the parents of the children do not go before the hospital committee until the children are actually in-patients of the institution and far from "bargaining" with their guardians as to what they are to pay or from any compulsion being exercised towards them it is the invariable rule after inquiring into the circumstances of the family to leave the representatives absolutely and wholly free themselves to assess the amount which they think they can give to the institution and instead of the average amount being