SCHEDULE VII.

Showing a group of equines (horses, mules, and donkeys) which have been dipped every three days for the last eighteen months. The photograph is merely intended to show that the animals are not affected in condition, and that—should the necessity arise—a similar procedure can be adopted with safety.

SCHEDULE VIII.

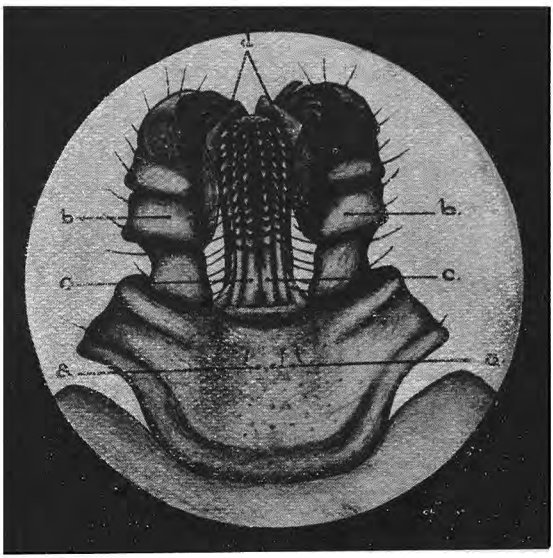

Fig. 1. Head of tick (*R. appendiculatus*), semi-diagrammatic.
(*a*) Capitulum or head. (*b*) Palps (separated widely).
(*c*) Hypostome. (*d*) Cheliceræ or horny claws.

Fig. 2. Photograph showing head from above.
The hypostome is buried in a piece of tissue (*b*). (*c*) Palps.
The cheliceræ are hidden by the palps.

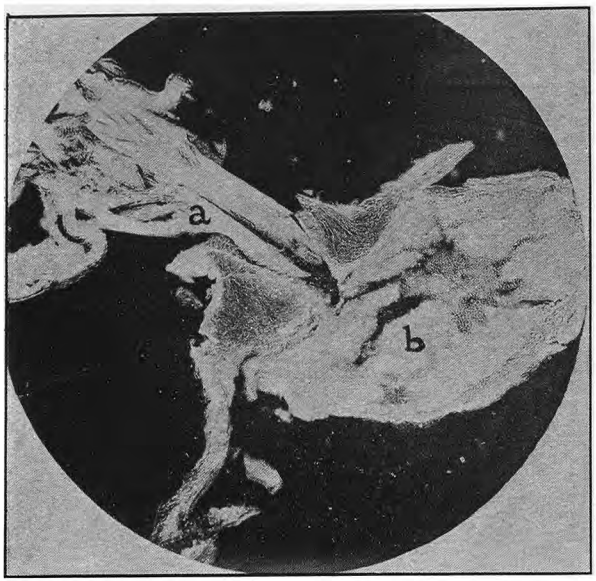

Fig. 3. Photograph of median section of head of tick attached to piece of its host's tissue torn away when detaching insect. (*a*) Hypostome. (*b*) Tissue.

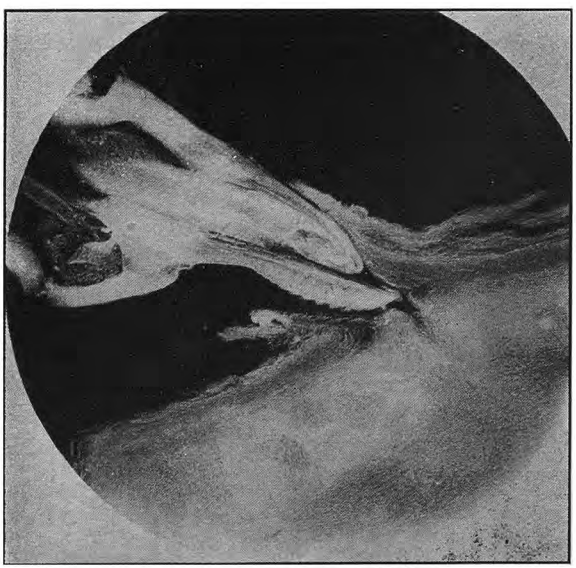

Fig. 4. Photograph showing median section of head of tick. The mouth-parts and hypostome are seen burrowing through the epidermis into the true skin.

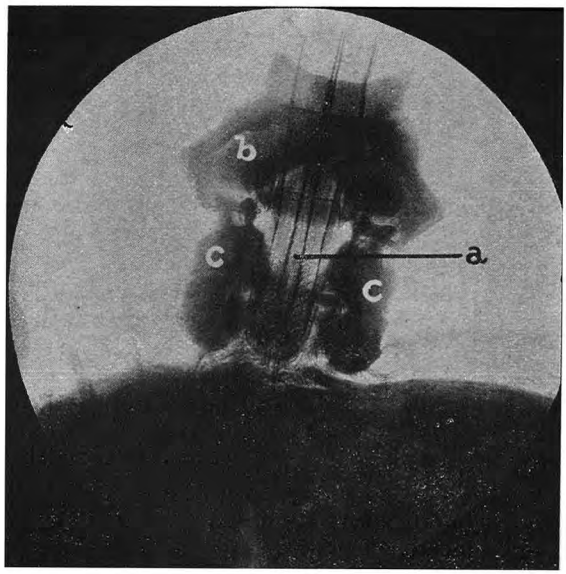

Fig. 5. Photograph of section of head of tick in horizontal plane. The insect has attached itself by its chelicerae (not seen) and is just commencing to bore through the external layers of epidermis with its hypostome (*a*). (*b*) Capitulum. (*c*) Palps.

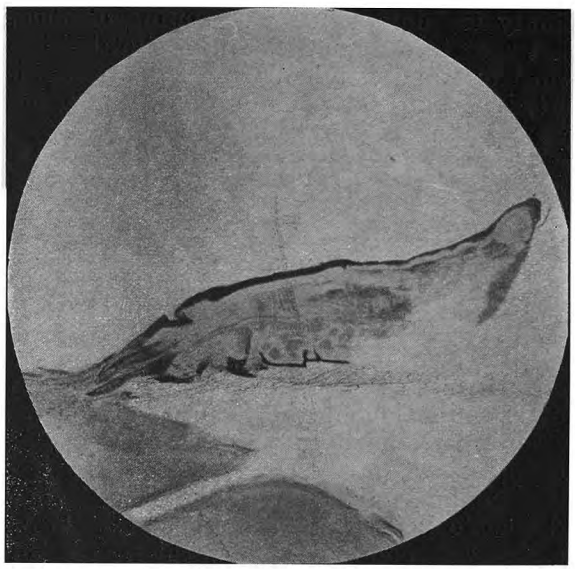

Fig. 6. Photograph of median longitudinal section through body of attached tick, showing mouth-parts *in situ*, abdominal canal, ova, etc.

N.B.—The above photographs are from "untouched" negatives.

SCHEDULE IX.

CORRESPONDENCE RELATING TO EFFECT OF "LABORATORY" DIP UPON WOOL.

Messrs....., Wool Brokers, Durban.

Dear Sirs,—Would you be so kind as to give me your opinion as to whether any material difference exists between the two fleeces which I am forwarding, marked A and B. I am anxious to know your opinion as to any effects which may appear to the expert eye to have been produced in sample B, which has been taken from a sheep recently dipped three times in succession in the Laboratory Cattle Dip which is now being so much used for the repression of East Coast fever. As the fluid in question is not highly alkaline, nor, so far as I know, affecting the staple of the wool in any particular, I am hoping that it will be your opinion that no substantial difference exists between the two fleeces attributable (in the case of sample B) to the dipping fluid. The fleeces, of course, are not in good order and are taken from common sheep which have been used for experimental purposes, so that they would not be considered good clips in any way, and it is for any difference which may exist in the staple of the wool itself that I am asking the favour of your expert opinion. The two sheep, A and B, have for weeks been kept under identical conditions as to herding, etc., so that a comparison may be made between them.

I may mention that, so far as I can see, no microscopical difference exists between the two samples, nor have I been able to see any noticeable difference in the fleece of sheep which have continuously been dipped every week over a period of many months.

It is now only ten days since the dipping of sheep B, so that it seems likely that a certain amount of the natural fat of the wool will have been washed out and not had time to be replenished.

I trust that, in asking for your opinion, I may not be deemed to be trespassing too far upon your time and trouble.

Sincerely yours,

GOVERNMENT BACTERIOLOGIST.

Government Bacteriologist, Maritzburg.

Dear Sir,—We own receipt of your favour of the 30th ulto., together with two fleeces of wool, for which we thank you. We have made a careful examination of the B fleece which has been dipped, and have also obtained the opinion of one of the best-known wool buyers, and he agrees with us that, so far as can be seen, the wool has suffered no damage to the staple by having been dipped.

We would like to point out that very often "dipped" wools do not give the same good colour, when washed, as a clip that has not been dipped, and how far your special dip may affect the wool in this direction could only be determined by having the two fleeces washed and comparing the result. The dipping has materially improved the value of the wool, but against this it of course must be noted that the loss in weight will be considerable, the one probably balancing the other, as far as a monetary value goes. We are very interested in anything that makes for any improvement in the wool industry and

should be glad to assist you in every way, and should you wish it we will have the two fleeces scoured and returned to you so that you can judge whether the colour is affected in any way.

Yours faithfully,

EXTRACT FROM FURTHER EVIDENCE OBTAINED BY ABOVE WOOL BROKERS.

"You have asked me to state whether the dipping has in any way adversely affected the wool. So far as I can see from a careful examination I cannot say that there are any signs in the clean scoured wool that the dipping has exercised *any bad* effect on the staple, and this is also the opinion of Mr....., to whom I have also shown the samples. We are both of opinion, however, that it is not in the interest of growers of wool to dip frequently, except, of course, when it is necessary to do so to stamp out scab.

"Our objections are based on the fact that wool that has been dipped frequently or within a comparatively short time of shearing requires more drastic treatment during scouring in order to take out the dip and produce a clean scoured result."