Probably the largest surviving type is the herd at Somerford Park. That place lies in Cheshire, about midway between Lyme in the same county to the north and Chartley in Staffordshire to the south; each is a few miles westward from the foothills of the Pennine chain. Though such near neighbours of the Chartley herd, the Somerford cattle appear to be highly immune from tuberculosis. The family of butchers which has dealt with the offcasts of this herd for the last sixty years has never known tuberculous disease to be found in the carcass of a slaughtered Somerford beast. Tuberculosis abounds in the shorthorn cattle of the neighbourhood. A further instance of their natural immunity may be mentioned. At the time of the cattle plague (rinderpest) some half-century ago, a farmer near Somerford had acquired a white park cow from his landlord, which stood in the cowsheds amongst forty-seven shorthorns. The plague carried off all the forty-seven shorthorns but left the Somerford cow in their midst unaffected. No cases of the plague occurred in the white park herd itself.

Deep-chested, large, handsome cattle, better milkers than any other known white park herd, the Somerford breed is particularly suitable to mate with the Kerry in the suggested attempt to obtain a type of animal which will show the milk and beef qualities of the shorthorn without its liability to tuberculous disease.

The experiment is being made. The first photograph (Plate, Fig. 1) shows the ingredients of the proposed new breed, Kerry heifers running with a young white park bull from the Somerford herd. The black ears and muzzle of the latter will be noted, and also that he is hornless, a characteristic of this herd. The Hamilton herd once was hornless, but now has acquired horns. Otherwise white park cattle are horned. The second photograph (Plate, Fig. 2) shows a fine bull of the crossed breeds, Somerford-Kerry, aged 2 years and 5 months.

The proposal is to establish the breed by interbreeding first-cross bulls and heifers. The reality or otherwise of their claims to immunity from tuberculosis can only be tested by much experience with great numbers of animals so produced. Meanwhile, this preliminary record of the experimental work which is being attempted may be of interest. The enthusiasm and great stockbreeding experience of Mr. Charles Sproston and the loan of the Somerford bull by Sir Walter Shakerley have made the experiment possible.

On June 26th I heard that the bull of the crossed Somerford-Kerry breed reacts to the tuberculin test. His temperature rose to 104.4°. The test was carefully conducted, the animal having been tied up for two days previously to get him contented in captivity. There is not the slightest other sign of disease; on the contrary, the animal is in magnificent condition.

The following is the view to which I incline as to the difficult fact that the tuberculin reaction is positive sometimes in animals which are otherwise apparently sound, or which, as Mr. Robert Mond has shown, continue in sound health for their full span of life subsequently. Assuming that the test accurately reveals the existence of a tuberculous infection, immunity is shown by the fact that the animal does not succumb to the attack. No animal is immune from attack. What must be sought is a type of animal which shows successful resistance to attack.

A MODIFICATION OF THE STOKES-GRITTI AMPUTATION.

BY

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(With Special Plate.)

THE human heel is Nature's stump. Every surgeon doing an amputation or a reamputation on the lower limb should try to reproduce it.

Syme's amputation is the nearest reproduction, and the Stokes-Gritti operation comes next.

Every stump should be fashioned where possible in the hope that it will bear upon its end some amount of the body weight; and every stump should be asked by the limb-maker to bear what share it can—it may be the whole weight, as after a Syme or a Stokes-Gritti operation,

or it may be one-half, one-quarter, or one-eighth. As time goes on the share will probably progressively increase. This gives a sense of compactness and stability to the limb, as well as a wider distribution of the burden. But so many failures have attended the Stokes-Gritti operation that it is not much in favour. I have the x-ray plates of five failures before me as I write.

One cause of failure is the displacement of the patella upwards by the pull of the quadriceps extensor. Another is the presence of pegs and other means to fix the patella down in order to resist this pull.

In recent cases I have cut the quadriceps attachment to the upper edge of the patella completely across, and then stitched the margins of the patella with catgut to the edge of the periosteum round the end of the femur. One or two additional deep catgut sutures will usually be sufficient, and a firm "button suture" through the skin flaps will make assurance doubly sure. This course was followed in the case illustrated in Fig. 1 (special plate), while the ordinary method was followed in that shown in Fig. 2.

AN ACID-FAST BACILLUS OBTAINED FROM A PUSTULAR ERUPTION.

BY

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THE bacillus was cultivated from chronic intractable pustules covering the back, buttocks, and thighs of a soldier returned from France. No micro-organisms were seen in the pus, and none could, at first, be cultivated from it. But subsequently there was grown, on more than one occasion, the acid-fast bacillus which is the subject of this note.

The patient, aged 24, was wounded in the foot; he returned home on a boat which was torpedoed and sunk in the early part of 1917. After being in the sea nearly an hour he was picked up and brought to England. The wound in the foot at first healed, but subsequently broke down again, and two operations had to be performed. For a fortnight he was treated in the 1st Eastern Hospital, Cambridge, by continuous immersion in the bath. It was about a month after this that the eruption was first noticed.

On February 27th, 1918, when first seen by me, the eruption had already been in progress for about eight months. During this period the man had been at a convalescent hospital, for the most part up and about. But he had been far from well, and at times confined to bed with sickness and giddiness. He appeared to me to be in good general condition, but had a somewhat dejected air, and moved slowly.

Back and buttocks were covered with swellings of various sizes and different stages of development; some were simply old red scars, others were just pointing and were much raised and indurated, measuring perhaps as much as an inch at their bases. From one of these was obtained a stringy pus, in quantity larger than one would have expected. What particularly struck me was the exceedingly chronic character of the inflammation and the deep-seated position of some of the lesions; for the most active pustules, though somewhat painful and tender to the touch, caused far less trouble than an ordinary boil, and spots which were watched from time to time seemed to make little appreciable progress. Moreover, there were a few swellings, distinctly fluctuating, which were completely subcutaneous, and over which the skin could be freely picked up.

The patient was sent to me because the pus contained no bacteria visible under the microscope, and no micro-organisms—except a few staphylococci and once a diphtheroid bacillus, thought to be adventitious—could be cultivated from it. It was obvious, therefore, from the first that I had to do with lesions which were not those of ordinary suppuration, and a Wassermann test was carried out to clear the ground. The result was negative.

The pus was examined by me on several occasions, and various methods of staining were used, but no bacteria were ever seen in it, even when the stain was that used

SIR JAMES PURVES STEWART: ISCHAEMIC MYOSITIS.
(See p. 151.)

FIG. 1.—Ischaemic myositis of 10 months' duration, showing contracture of flexor muscles of wrist and fingers, with wasting in their lower two-thirds.

FIG. 3.—Ischaemic myositis of 53 years' duration, showing inability to extend wrist or fingers, also wasting of muscles in lower two-thirds of forearm.

W. A. CHAPPLE: A MODIFIED STOKES-GRITTI AMPUTATION.
(See p. 158.)

FIG. 1.—A Stokes-Gritti in which the quadriceps had been cut and the edges stitched with catgut only.

FIG. 2.—A Stokes-Gritti in which the quadriceps had not been cut.

LIONEL J. PICTON: ATTEMPT TO BREED TUBERCLE-
IMMUNE CATTLE.
(See p. 157.)

FIG. 1.

FIG. 2.