door by the patient herself. Seeing apparently nothing the matter with her, I told her that she had been reported as suffering from scarlet fever and I asked her if she had been ill. Her answer was that she had had a rash upon her, which appeared suddenly on the morning of July 29th; that she was out in her garden at the time, and she had experienced some teasing, tickling feeling about her chest and other parts. Feeling a little "out of sorts" at the same time, she went in-doors, and to her surprise she found on examination that she had a "spotty" rash over the chest and abdomen. There was no sickness or diarrhoea. The "out of sorts" feeling passed speedily away. She attended to her household duties as usual and did not feel ill. There was no cutaneous eruption visible at the time of my inquiry on the 12th. She had slight thickening of the post-cervical glands and was desquamating freely, flakes as well as finer epithelium separating from her hands as well as from other parts.

CASE 9.—The last patient had a son aged two years, who had been reported in the same manner as his mother. This child I noticed had some little sores about his mouth and on his neck. His mother said he was quite well until the 6th, when a number of little papules appeared on different parts of his body and they were itchy, but no other form of rash was observed. I noticed that he had indurated post-cervical glands. He was not ill at the time, nor had he been so at any time. He did not lie down, and ate his food as usual. Very slight desquamation followed in this case.

I have come to consider these papular eruptions with white centres as varieties of *rötheln* when associated, as was the case here, and when nothing breaks or escapes from them unless they are scratched or rubbed. Case 8 seemed to me to be one of mild *rötheln* without a single scarlatinal feature unless the desquamation be taken for one; possibly it was this that caused it to be reported.

CASE 10.—The only other case of the kind which I need mention is that of a boy aged two years, who was reported on July 10th and inquired about on the 11th. I found the child's mother standing at the door when I visited the house; the child was playing in the garden. On looking at the patient I noticed that he had a rash—dark, mottled and fading—on the side of his face and neck, and on his chest and other parts of his body as well, I was informed; but still it was sufficiently distinct to show its sparse measles-like character. In short, it presented the appearance of *rötheln* rash on the third or fourth day. There was no indication of a sense of illness and there had been no failure of appetite in regard to food. No isolation was attempted, and the "scarlatina," to use the word on the notification paper, did not spread in that family or the immediate neighbourhood. No ill result followed from the patient going about covered with the exanthematous rash. I have not known any harm to happen in cases such as I have described.

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ON THE POSSIBLE ADVANTAGES OF EMPLOYING DECALCIFIED MILK IN THE FEEDING OF INFANTS AND INVALIDS.

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BEFORE Arthus and Pagès discovered that blood could be deprived of its coagulability by receiving it into solutions of oxalates and fluorides they had already discovered that milk in which the lime salts had been precipitated by these same additions would no longer clot with rennet. I shall endeavour to indicate a possible practical application of this fact. Milk curdles under two entirely distinct sets of conditions: (1) it curdles on addition of an acid and (2) it curdles under the influence of rennet (when the reaction of the milk is either neutral or slightly acid). The two varieties of curd which are obtained under these circumstances may be denominated "acid curds" and "rennet curds" respectively. Acid curds must inevitably be formed in the stomach after milk has been drunk if the gastric contents are allowed to become acid. Such curds (we are familiar with them in ordinary life in the form, for instance, of cream cheese or sour milk) are probably not sufficiently firm to set up digestive disturbances. On the other hand, rennet curds

(such as we are familiar with in the form of renneted milk and of ordinary cheese) may be extremely firm. It is therefore in all probability these rennet curds which set up the familiar infantile dyspepsia of bottle-fed children. If this is so, the facts elicited by Arthus and Pagès would appear to be of dominating importance in the treatment of these dyspeptic conditions.

In order to appreciate this correctly the following facts must be attended to: (1) rennet coagulation is delayed and curdling becomes less and less firm as an increasing proportion of the lime salts of the milk becomes precipitated as insoluble salts (Arthus and Pagès); (2) addition of soluble lime salts¹ (up to a certain maximum) causes increased rapidity of rennet-coagulation accompanied by increased firmness of clot (Arthus and Pagès); (3) human milk contains 0.03 per cent. of lime (Bunge); (4) cow's milk contains 0.17 per cent. of lime (Bunge). It is evident from these facts that the rennet coagulation in the human stomach could be delayed by precipitating a portion of the lime salts contained in cow's milk. It is further evident that a great proportion of the lime salts in cow's milk could be dispensed with without injury to the nutrition of the human infant, inasmuch as the infant, who does not need to walk for more than a year after birth, is fed with milk which is provided with a view to the calf walking almost as soon as it is born. Lastly, the question of a suitable precipitant for the lime in the milk comes up for consideration. As I have already shown, the salts employed by Arthus and Pagès were the fluorides and the oxalates—that is, salts which have poisonous properties and which cannot be employed in dietetics. In lieu of these citrate of soda² may be employed as an efficient precipitant. I find in the samples of milk with which I have experimented that an addition of 1 in 200 of citrate of soda—one-fiftieth volume of 25 per cent. citrate of soda—suffices to prevent any rennet coagulation, whilst it can hardly be detected by the palate. Cow's milk with a somewhat less addition of citrate of soda would, with regard at any rate to its lime salts, constitute a true "humanised milk." If it should turn out that the acid curds are also contributory to the dyspeptic troubles of infants, super-addition of the customary bicarbonate of soda or lime-water³ would apparently be indicated.

THE RELIEF OF INTRA-VENTRICULAR PRESSURE BY DRAINING THE SUB- ARACHNOID SPACE IN TUBERCULOUS MENINGITIS.

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MR. PARKIN has recorded a very interesting case of tuberculous meningitis⁴ in which he drained the subarachnoid space behind the medulla, and in which he refers to two papers of mine on the subject.⁵ My dissections were not made, however, to demonstrate that the subarachnoid space could be drained with advantage in this position; they were made simply to find out the condition of the opening between the fourth ventricle and the subarachnoid space. Mr. Parkin, however, made use of the dissections in his operation, and I am glad to think they were thus of use; but I cannot myself help thinking that it is a rather dangerous region to operate in and especially to manipulate a probe so near the fourth ventricle. The question of the relief of increased intra-cranial pressure in tuberculous meningitis is a very interesting one to me, and perhaps Mr. Parkin will pardon me if I take exception to some of the statements in his interesting paper. Since I wrote the first paper to which I have referred, during the time I have been patho-

¹ This fact does not appear to be taken advantage of, as no doubt it ought, by the purveyors of rennet extract.

² This addition has already been employed in preventing the coagulation of the blood by Griesbach and Pekelharing.

³ Bunge (Physiological Chemistry, translated by Wooldridge) has pointed out with respect to the latter that lime-water contains less lime than the cow's milk to which it is added, so that, paradoxical though it may seem, milk diluted with lime-water contains less lime than the natural milk. Lime-water probably aids the digestion of cow's milk by virtue of its alkalinity, which postpones rennet-coagulation.

⁴ THE LANCET, July 1st, 1893.

⁵ Brit. Med. Jour., Oct. 17th, 1891, and April 8th, 1893.