

fibrinogen, which becomes solid at a much lower temperature than is necessary to solidify albumen, and which, when the blood is clotted, changes, as we have seen, into fibrin.

In addition to these constituents the blood contains a small quantity of various salts, which are chiefly the carbonates, chlorides and phosphates of soda and potash, and these being alkaline cause the blood itself to be alkaline in reaction, by which I mean that if you place a piece of red litmus paper in blood you would find it turn to a blue colour. With reference, finally, to the corpuscles, the red variety are of a reddish yellow colour; each one of them is round and flat like a coin, but rather thinner in the middle than near the edge. They are all very much of the same size, about $\frac{1}{2500}$ of an inch in diameter and about a quarter of that size in thickness. In consequence of their great number, they are crowded and heaped together like a pile of shillings; they are soft, flexible, and as they move along in the blood stream they change their shape from the pressure to which they are subjected against each other, but as soon as the pressure is removed they resume again their previous form. In consequence of this elasticity they can be forced through minute spaces, which are much smaller than their usual diameter. The elastic substance of which they consist, called the *stroma*, is a spongy structure, like a transparent bag, which holds the red colouring matter, and this can, in the laboratory, by certain processes, be dissolved out of the corpuscles so that the stroma is left as a colourless framework. The colourless corpuscles vary very much in size, and most of them are larger than the red bodies, being about $\frac{1}{2500}$ of an inch across, but some of them are, however, even smaller than the red variety. In consequence of their want of colour and their comparative fewness they have to be carefully looked for in healthy blood in order to be seen. But, in some diseases, and especially in those in which the patient suffers from extreme anæmia, there are many more white corpuscles than are natural, and so this disproportion in numbers is one method of diagnosis in the discrimination of these complaints. The colourless corpuscles are much more active than the red, and frequently change their shape of their own accord whilst being examined under a microscope. They consist of a cell or tiny bag, containing a number of minute granules, and a rounded central body which is called the *nucleus*. This distinguishes the white corpuscle again from the red, which in human beings, and also in all those animals which suckle their young, has no nucleus. Birds, reptiles and fishes, on the other hand, possess red corpuscles which have a large oval nucleus.

(To be continued.)

The British Medical Association at the Sanitary Institute.

AN interesting series of meetings were held last week by the President and Council of the Sanitary Institute to welcome the members of the British Medical Association, during which gatherings papers of an interesting nature were read and discussed. A social aspect was given to the proceedings by the more serious part of the programme being prefaced by tea and cakes, which were discussed with, no doubt, improving conversation.

One of the topics of conversation dealt with a suggestion which seemed to have gone round amongst the members of the British Medical Association with regard to the formation of a Registered Nurses' Association to be affiliated to the British Medical Association in order that medical men should have a body of qualified Nurses to rely upon to attend their cases. This suggestion was met, one need hardly say, by members of the Royal British Nurses' Association, by pointing out that their Corporation supplied such a want—that the chief object of the Royal British Nurses' Association is to register certificated Nurses, and to guarantee their efficient training. And moreover, it was insisted that the formation of a second body is unnecessary, and inasmuch as it would withdraw support and interest from the mother Society—the Royal British Nurses' Association—it would be injurious. This view of the case was, of course unanswerable, but it is a regrettable fact that amongst the medical men present, the impression distinctly prevailed that the Royal British Nurses' Association is losing its professional character, and that the Executive Council are a coterie in which interests quite apart from professional matters take precedence. And discussion of the question seemed rather to strengthen than to lessen the conviction.

Several Nurses—or perhaps it would be safer to say ladies in Nursing uniform—were present at the reading of the papers, most of which were indirectly of practical bearing on the hygiene of Nursing. Professor Frankland's paper on the "Bacteriological Examination of Water" seemed of special interest to the profession, as showing under what conditions pathogenic bacteria or disease germs thrive and multiply in water.

But it was somewhat startling to hear Professor Frankland shake one's accepted faith in the danger of surface and river water by saying that typhoid and cholera germs do not multiply in such water *unless it is sterilized*; his theory being that the harmless bacteria existing in such water render it "immune" from pathogenic bacteria; whereas to sterilize the water by boiling or otherwise, while destroying the harmless bacteria, destroys also their antagonistic action to disease germs. This being so—and the theory is scientific and logical—still the Professor was hardly prepared to say, when questioned by a Nurse present, that he would cease to sanction the accepted recommendation of hygienists that all water and milk taken as food by the inmates of a household in which there was a case of enteric or other fever communicable by milk or water, should be previously boiled.

[previous page](#)

[next page](#)