

fractionation and all trace of it is lost." Through the complicated processes to which the extract was subjected by them it is unnecessary for us to go, save to express the belief that the decomposition was, in part at least and perhaps entirely, due to the use of baryta.

The existence of "vitamine" in the sense that Funk employed that word is therefore disproven. The word itself is not objected to and may be applied to the substance when it is isolated, but the premature publication of results which, on the findings of the writer himself, are subsequently shown

to be erroneous creates confusion and retards progress. At the present day the problem is no nearer solution than it was four years ago, nor is progress likely to be made until improvements are effected in the methods employed by chemists in this work; those now employed are crude and imperfect.

*Bibliography.*—Fraser, H., and Stanton, A. T.: Studies from the Institute for Medical Research, No. 12, 1911. Funk, C.: Journal of Physiology, vol. xlii., p. 395, 1911. Ibid., vol. xlvi., p. 173, 1913. Drummond, J. C., and Funk, C.: Biochemical Journal, vol. viii., p. 598, 1914.

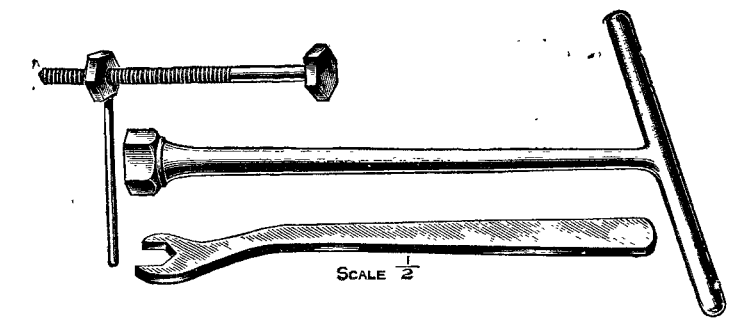
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A BOLT FOR THE TREATMENT OF FRACTURES.

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THE plating of a long oblique fracture presents some difficulties. To ensure complete fixation two plates are required, one

FIG. 1.



Showing the essential parts: 1. A bolt. 2. A nut with a soft wire brazed to one facet. 3. A flat spanner. 4. A clock-key spanner.

on either side of the bone at the opposite ends of the fracture. Even if only one plate is used the shaft of the bone beyond the

FIG. 2.



Shows a fracture before bolting.

end of the fracture must be exposed to allow the application of the plate. Some years ago I devised a bolt (Fig. 1) for the treatment of long oblique fractures and have found

it useful in fractures which are only slightly oblique.

The mode of application is as follows: The fracture is reduced. A hole is then bored through the centre point of the fracture with a Morse drill. The axis of the hole should be at right angles to the axis of the bone. If the fracture is not very oblique it is best to set the bolt somewhere near a right angle to the fracture. The hole should allow the bolt to pass easily. The bolt is pushed through till the end just emerges on the opposite side. (Figs. 2 and 3.) The nut is then taken up by the wire and held so that the bolt can engage when turned by the clock-key spanner. The bolt is then screwed home, rotation of the nut being prevented by traction on the wire. Very

FIG. 3.



Same as Fig. 2, after bolting.

little force is necessary to bring about complete fixation of the fracture. When this is accomplished the protruding end of the bolt is cut off by a pair of screw-cutting forceps. The wire is then bent round the bone to the head of the bolt and the redundant part cut off. The object of leaving the wire *in situ* is that the nut can easily be withdrawn if it is necessary to remove the bolt when union has occurred. If the bolt passes obliquely to the axis of the bone-shaft the head can easily be housed by cutting away some of the shaft.

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