The stained specimens are brought into paraffin in the usual way, and cut by the Cambridge rocking microtome; with proper precautions, a liberal supply of freshly sharpened razors being regarded as one, rolling seldom occurs; more frequently one has to contend with a determined tendency of the ribbon of slices to fly back and attach itself to the brass cylinder which carries the object; this is due to an abundant disengagement of electricity, produced partly by the friction of the razor with the paraffin, and partly I imagine by the fracture of the innumerable siliceous spicules of the embedded sponge. The attraction between the ribbon and cylinder is most troublesome in dry weather. It may be overcome by strongly blowing away the ribbon with the breath from the razor while cutting. Rolling usually occurs when exceptionally thick slices are being cut; it may be obviated by holding a piece of writing paper close to the edge of the razor and parallel with it, leaving just enough room at the edge for the slice to pass under it. The paraffin which I have found most suited for this work is that supplied by the Cambridge Scientific Instrument Company, it melts at about 54° C., and is sufficiently hard for all purposes. If required softer, it can be mixed with paraffin of a lower melting point. In some few cases when I wished to obtain slices with the spicules of the Sponge as little displaced as possible (*e.g.*, in the case of *Tetilla merguiensis*, where it was necessary to ascertain the orientation of the calthrops-like triæna), I found the addition of a little Canada balsam dissolved in xylol useful; the xylol passes off in the water-oven, and the balsam remains to give additional toughness to the paraffin. In the few instances in which I tried this process, it certainly answered its purpose very well.

The slices when cut were attached to the glass slide by the absolute alcohol process; the slide is first washed with a camel's-hair brush dipped in absolute alcohol, and allowed to dry, the slices are then laid on it and the brush full of alcohol "dabbed" over them; slices, if at all wrinkled, spread out under this treatment and come to lie very evenly on the slide. The paraffin is then melted and washed away with xylol in the usual manner. In all cases the slices so prepared were finally mounted in balsam; other methods of attachment were employed, when paraffin-cut slices were brought into glycerine for final examination, but this was a process seldom employed; when glycerine preparations were required, the slices were usually cut by the freezing process, either embedded in gum or jelly. The gelatine freezing process has already been described by me, but it may be useful to add here a brief account of it, with some additional details, which experience has shown to be necessary. The fragment to be cut is brought into distilled water and thence into clear melted jelly, prepared from ordinary gelatine (Nelson's gelatine answers admirably); when the tissue has soaked till it is completely permeated by the jelly it is transferred to a Rutherford's freezing microtome, and when well frozen cut with a razor as cold as possible. It is at once transferred by a cold needle to a glass slide, an operation which requires skill, and which succeeds best in cold weather, since, owing to the excessive tenuity of the slice, the slightest elevation