With one exception these results indicate a logarithmic relation between the stiffness (S) and the tension (T) of the form

$$S_0 - S \propto a^{-T}.$$

Here S_0 is the stiffness when the tension is very great.

Thus, taking the numbers in experiments (b) and (l) above, we obtain the following comparison with experiment of the formulæ—

$68 - S = 61.5 \times \left(\frac{2}{3}\right)^{\frac{T}{1000}}.$		$1950 - S = 1987 \times (1.08)^{-\frac{T}{10,000}}$	
Experiment.	Formula.	Experiment.	Formula.
41	41	182	184
28	27.3	171	170
18	18.2	155	158
12	12.1	142	146
8	8	132	135
4	2.4	125	125

Considering the excessively uncertain nature of such experiments, these results may be looked upon as agreeing well with the law suggested.

2. Preliminary Sketch of the Thermo-electric Diagram for Iron, Gold, and Palladium.

3. On the Muscles which open and close the Mouth, with some Observations on the Active and Passive Condition of Muscles generally. By Dr Gamgee.

4. Observations and Experiments on the Cerebral Hemispheres and Corpora Striata of Birds. By Dr M'Kendrick. Communicated by Professor Turner.

Surgeon-Major Black exhibited twenty-five large photographic views of the late eruption of Mount Vesuvius, which had been executed by his brother, John Melton Black, Esq.