XII. "On the Cutaneous Sensibility of the Hand and Foot in different parts of the Surface, as tested by the Continuous Galvanic Current." By HARRY LOBB, Esq. Communicated by JOHN SIMON, Esq. Received May 28, 1861.

Procure a 60-element Pulvermacher's bath battery, excite it with ordinary vinegar, and hang it up free in the air by a piece of cord. Attach conducting wires to the terminal hooks, and to the wire from the copper or positive pole connect a moistened sponge-conductor, which tie round the neck, so that the sponge may rest upon the skin over the middle cervical vertebra. To the wire, from the zinc or negative pole, attach a conductor of smooth metal.

Upon placing the metal conductor upon the skin of the arm or back of the hand the burning sensation is unbearable for a single moment.

Upon placing it upon any portion of the skin of the palm, or under surface of the fingers, no pain is experienced, nothing but the touch of the conductor.

There is, however, a line running down the side of each finger nearer the back than the palmar surface, where painful sensation commences. This line is also to be traced round, between the thumb and first finger, along the back surface of the thumb and the limit between the skin of the palm and the wrist. This line can be easily detected by the eye; the smooth papillary skin of the palm being insensible, whereas the hairy, polygonally reticulated skin of the back of the hand and wrist is acutely sensible.

The skin on the back of the first phalanges is insensible, and also a part of the way down the second, varying in different persons. If the conductor be placed in the centre of the palm of the hand and held there with gentle pressure for a minute or two, the idea conveyed is that of greatly increasing pressure, as if the instrument was being thrust through the palm, until the pain becomes unbearable; but there is no sensation of burning, pricking, or stinging. The same laws are discovered to hold good in respect to the foot.