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SOME NEW

8.

ANTHROPOMETRICAL INSTRUMENTS.

BY

C. R. BROWNE, M.B.

A PAPER

Read before the **ROYAL IRISH ACADEMY**, December 4, 1891;

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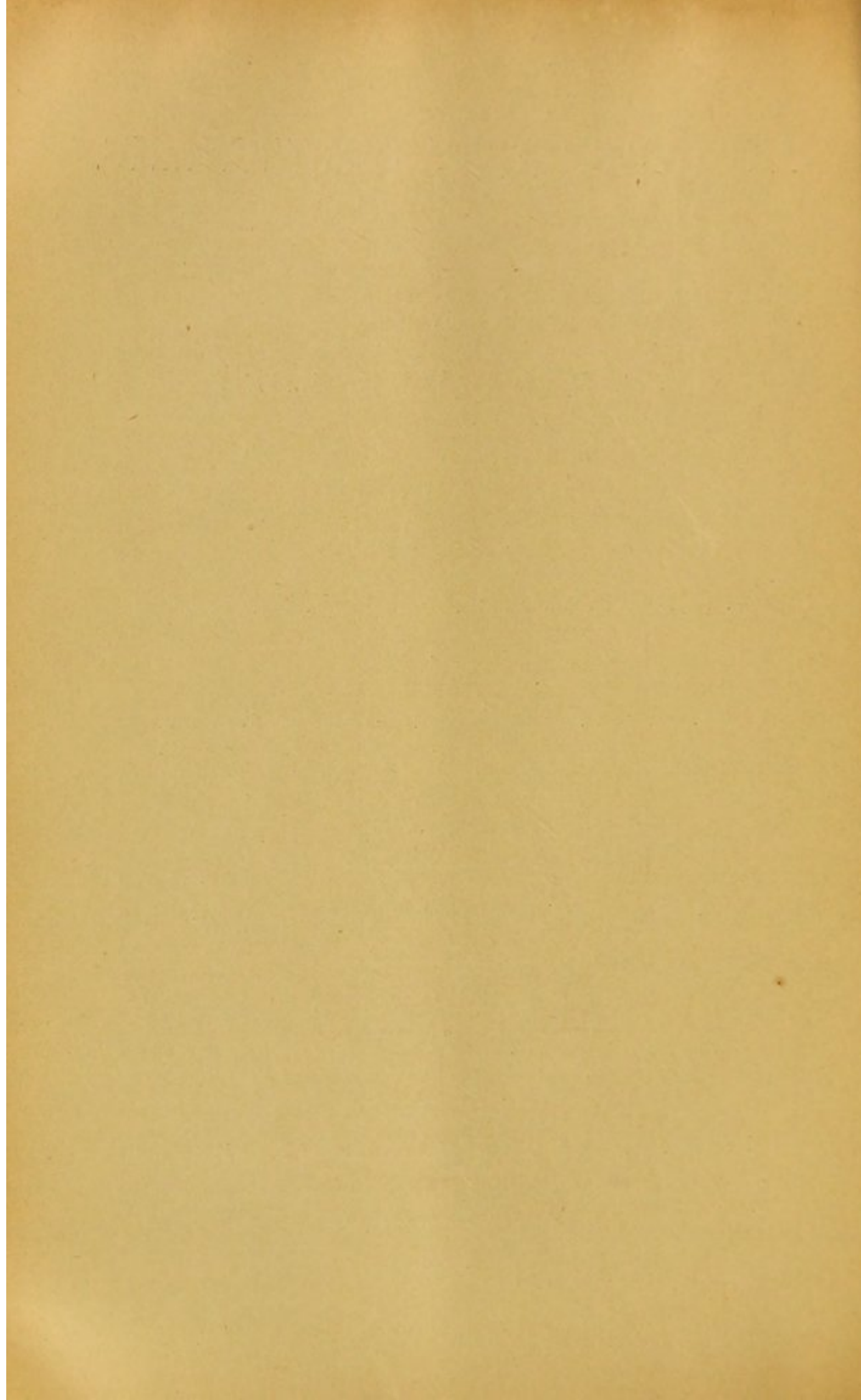
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XXIV.

SOME NEW ANTHROPOMETRICAL INSTRUMENTS.

By C. R. BROWNE, M.B.

[COMMUNICATED BY PROFESSOR D. CUNNINGHAM, M.D.]

[Read DECEMBER 4, 1891.]

VERY soon after the regular work of the Anthropometrical Laboratory of Trinity College, Dublin, was started, it became evident that there was need for some slight improvement both in our methods and instruments.

The first change made was the abolition of the measurement from tip of mid-finger to centre of patella, as this was found to be difficult,

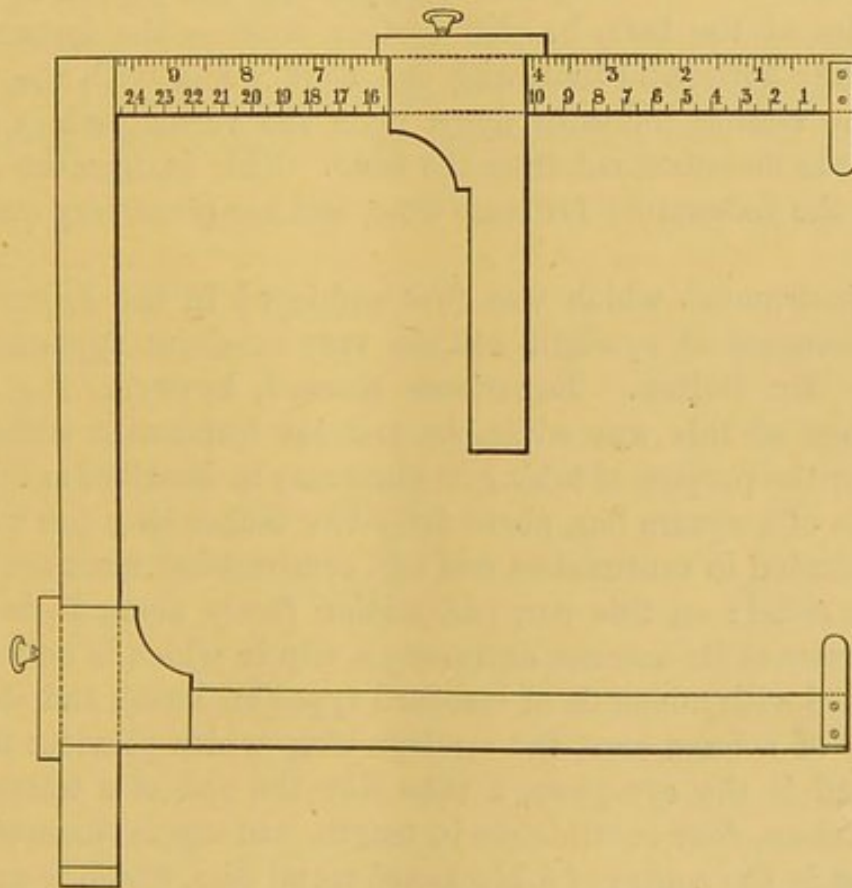


FIG. 1.

I may say practically impossible, to get correctly, owing to the very great discrepancies made by slight differences in the attitude of persons being measured.

The next was the introduction of a reliable instrument for taking radial measurements of the head, such as the auriculo-cranial height and the auriculo-alveolar, and auriculo-nasal lengths. To take these, Professor Cunningham introduced a modification of Busk's craniometer. (See fig. 1.) It consists of an L-shaped portion, each limb twenty-five centimetres in length, one arm of which is terminated by a conical ear-piece of ivory, and is graduated on two scales, millimetres and tenths of an inch from below upwards—the zero of the scale corresponding to the centre of the ear-piece. This limb carries a short sliding bar, moving freely up and down by means of a collar. The other limb is plain and ungraduated, and carries, by means of a long collar, a bar equal in length to the graduated limb, parallel to it, and like it terminated by an ear-piece. The mode of action is as follows:—The person to be measured being seated in a chair, the operator stands behind, and, having introduced the ear-piece on the fixed limb into one ear, he slowly moves the sliding bar until the plug it carries is well situated in the other, and then, getting the person to hold the extremities of the bars, he still further steadies the instrument by grasping the horizontal limb with one hand while with the other he moves the sliding indicator down upon the vertex, which done, he reads off the measurement from the scale. This instrument has been in use in the Laboratory for some time, and has given very satisfactory results.

The instrument which was first employed in the Laboratory for testing keenness of eyesight was the very excellent apparatus introduced by Mr. Galton. Experience showed, however, that a slight modification of this was advisable, and the instrument which I have devised for the purpose of taking its place may be described as follows:—It consists of a square bar, about forty-two inches long (on which is a scale graduated in centimetres and half centimetres), mounted horizontally on a stand; on this bar, and sliding freely along it, is a collar, which carries at its anterior extremity a clip in which is held the test-card printed with numerals of standard type (brilliant), and also holds, by means of a fixed arm, the carriage lamp which provides the light. At one end is the eye-piece, a tube like the end of a telescope, but without lenses, four centimetres in length, and one in diameter at the orifice, set in the centre of a blackened metal disc, which is so large as to cut off all view of the test-tablet except that through the tube. Care is taken to have the light as constant as possible by having the lamp fixed in its position with respect to the test-card, and by cutting off direct daylight by means of a large blackened shield. This shield

is movable, and can be attached to whichever side of the instrument the window giving the direct light may be situated on.

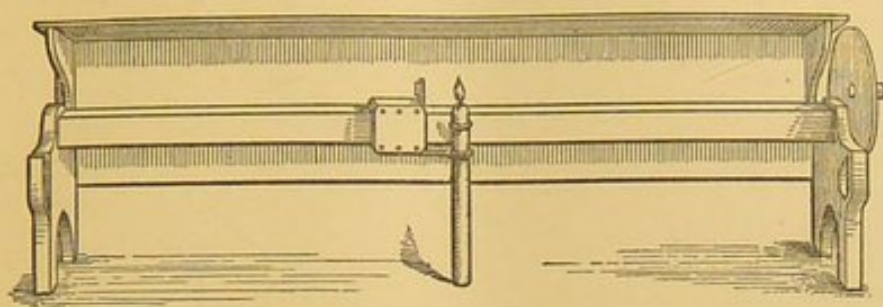


FIG. 2.

The main points in which this instrument differs from Mr. Galton's are—1st, Instead of several fixed test-tablets there is only one which is movable along the graduated bar; 2nd, The distance of the lamp from the test-card is fixed and constant; 3rd, The disc and tubular eye-piece 4th, The shield to cut off direct daylight.

It is in contemplation soon to begin to take a series of records of the curvatures of the cranium by means of leaden strips, such as were used by Professor Cunningham in his investigations upon the lumbar curve.

