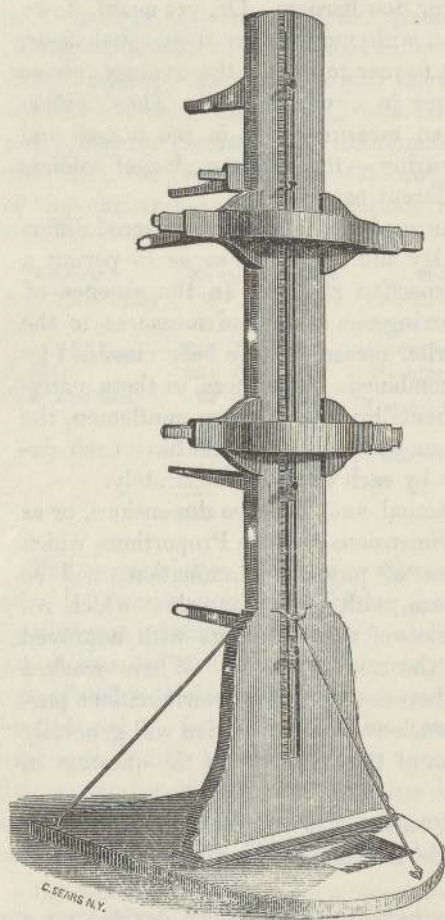


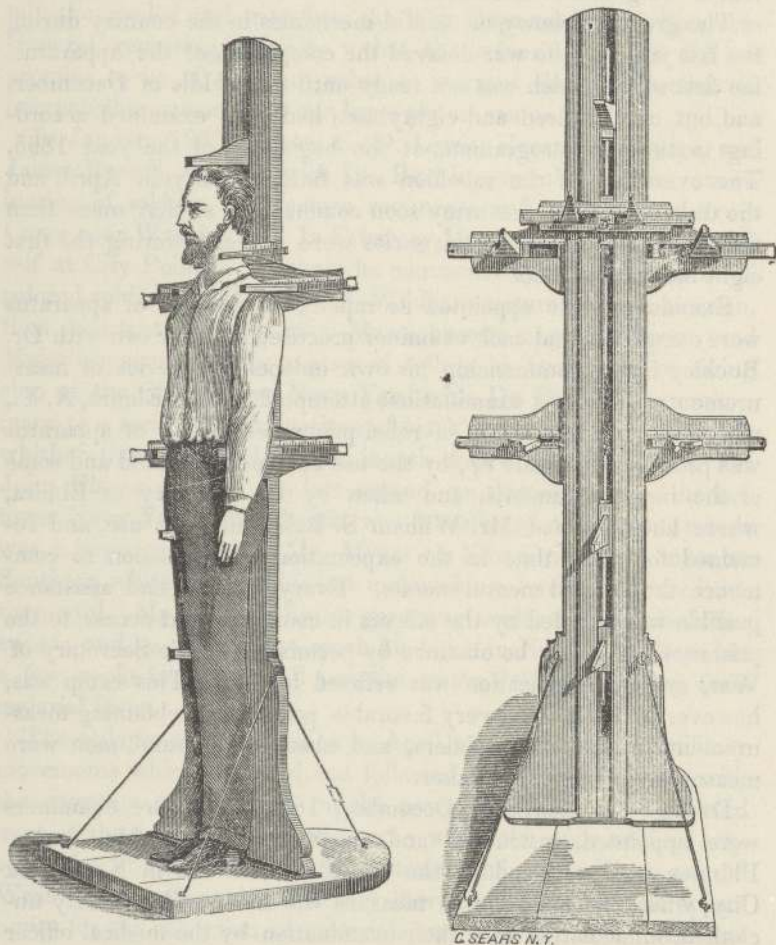
the proper size for soldiers' clothing, for which he had undertaken a considerable contract with the military authorities. Ballingall has given<sup>1</sup> some account, as well as a representation of it; and states that the instrument is deposited in the Museum of the Edinburgh University. It enables the total height, breadth of neck, of shoulders, and of pelvis, the length of legs and height to the knee to be measured with greater accuracy and rapidity than otherwise would be possible, since when the man to be measured has taken his position, gauges are quickly set for the measures of all these dimensions, and the numerical values read off after the man has left the instrument. Instruments of this kind were constructed



for the Sanitary Commission in 1863, at the office of the U. S. Coast Survey, under the special supervision of the late Professor Bache, the lamented Superintendent of the Survey, and Vice President of the Commission. These contained some improvements upon the original instrument, especially such as permitted more accurate adjustment to the person, as well as an additional gauge for measuring the height of the body proper, of which the seventh cervical vertebra was taken as the limit. When in August and September, 1864, the new instruments were ordered, Dr. Douglas kindly charged himself with the supervision of the work, which was executed with great care and fidelity by Mr. William Belcher of New York. In the new instruments many addi-

<sup>1</sup> *Outlines of Military Surgery*, 1855, pp. 35, 36.

tional improvements were introduced, a considerable part of them being suggested by the experience obtained by the use of the two former ones, which were themselves correspondingly modified as soon as they could be spared for the purpose. The annexed figures will indicate the general construction of the andrometer, and the manner of use.



The graduations of this instrument, and of all our implements for linear measure, are in inches and tenths, all danger of error from the use of divisions not decimal being thus avoided. It is a source of regret to the author that he did not employ the metric system for all these measurements, not only as attended with less uncertainty on account of the smaller unit employed when centi-