

and that in the formulæ the numerical value of m also implies a local unit of mass. But to avoid confusion it is best that in formulæ for application m should be replaced by W/g . And, in any comparison of results involving different values of g , let each force be expressed in poundals by simply multiplying by the local value of g .

Professor Greenhill has made a marked innovation in this matter as compared with the usage of recent English writers. Calling the pound the unit of weight, and refusing to regard weight as a force but rather as "the quantity which is determined by the operation of weighing," he practically makes the pound a unit of mass; and, abandoning the formula $W = mg$, puts W for the number of pounds, so that in formulæ it appears where we are accustomed to see m . Then, with regard to force he says "it is convenient to take the attraction of the earth on a pound weight as the unit of force, and to call it the *force of a pound*; this is the British unit of force in universal use in all practical problems of architecture, engineering, mechanics, and artillery."

As contrasted with the usual notation supposing absolute units to be employed, W is thus merely put in the place of m so that Wg instead of mg is the expression in poundals for the force of gravity acting on the body. At the same time, however, Professor Greenhill uses F , R , and other symbols of force as co-dimensional with W , so that they are the numbers of local pounds of force, and it must be remembered that the expressions for the same forces in poundals are Fg , Rg , etc. With regard to gravitation and absolute units, he says: "The attraction of the earth in any locality provides such a convenient and invariable measure of force that all instruments, great and small, for measuring force and work are calculated and graduated originally in gravitation measure; the reduction to absolute measure if required being made subsequently by means of the local value of g ; presumably determined previously with the greatest attainable accuracy by means of pendulum experiments."

NOTES.

A REGULAR meeting of the NEW YORK MATHEMATICAL SOCIETY was held Saturday afternoon, April 7, at half-past three o'clock, the president, Dr. McClintock, in the chair. Mr. Pomeroy Ladue, of the University of Michigan, having been duly nominated, and being recommended by the council, was elected to membership. The president announced the resignation on account of ill health of the treasurer, Mr.