bodies of ordinary temperatures, and a_2 for that from the sun ; and this distinction is made throughout, in all the numerous equations into which the radiated heat of the sun enters.

The necessity for this, which at the time was considered only highly probable, is now fully shown by Mr. Langley's recent very interesting and important experiments on invisible heat spectra (*Amer. journ. sc.*, January, 1886). It requires a glance only at the graphic representation of his results (plate iii.) to see that when the temperatures of the bodies differ, the absorbing power of the body of lower temperature, for the heat of a body of higher temperature, is greater than the radiating power at the end of the spectrum of short wave-lengths, and the reverse at the other end. Hence, where there is selective absorption, as there usually is more or less where any part of the heat is reflected, the radiating and absorbing powers of a body, for the heat-rays as a whole, may not be equal. If the reflected heat were considerable, and mostly of the rays of either end of the spectrum, the difference might be considerable. The amount of heat reflected by the moon is probably much less than that radiated, and the white light of the moon does not indicate that there is much, if any, selective reflection. There cannot, therefore, be much difference between the radiating and absorbing power of the moon for the sun's heat-rays taken collectively. The little difference which there may be would, of course, affect my result slightly. If the absorbing power were a little greater than the radiating power, then the temperature of the moon would have to be a little higher to radiate as much heat as it receives and absorbs. It is seen from what precedes that the possible inequality of radiating and absorbing powers has not been overlooked, and was provided for in my paper referred to above, at a time when there was scarcely a suspicion with regard to the general applicability of the law. But its greatest possible effect on my result was considered of too little consequence to refer to in a short communication on a matter in which, at best, we can expect only approximate results. It is true that the equality of the radiating and absorbing powers was one of my conditions, and that the result is strictly true only for this assumed equality, and that this is therefore one of the 'limitations.' But it does not seem that the 'airless body' should be put into the 'endless list;' for I think that astronomers are very nearly, if not quite, unanimous in the opinion that the moon has no atmosphere which can sensibly affect its radiations.

My conditions, strictly, are for mean or stationary temperatures only; but they are applicable without sensible error to the case of the varying distance of the moon, on account of the slowness with which the distance and the corresponding temperature change. With regard to the lunar diurnal variations, the conditions determine nothing more than the limit beyond which the maximum temperature of any part of the moon's disk cannot go; but this is all that has been claimed. If the method is not of general application, or the results deduced extremely accurate, I think they are not to be despised where we, as yet, know scarcely any thing. The laws of Kepler were important in his time, notwithstanding they did not take into account the 'endless list' of perturbations.

I am sorry Mr. Langley has resolved to have nothing more to say on these interesting subjects, for there are many things, somewhat in common with our separate lines of research, which I would like to discuss in a candid and friendly manner.

WM. FERREL.

Washington, Jan. 28.

Professor Newcomb's address before the American society for psychical research.

In your editorial note of Jan. 29, on Professor Newcomb's presidential address to the American society for psychical research, reference is made to his 'very acute observation' that in certain drawings published by the English society as apparent results of thought-transferrence, "the lines join perfectly, as would be the case with the work of a draughtsman who could see, and this too in the drawings made blindfold." You go on to say that 'the natural inference is that there was some trickery;' and you add, that the English society's work 'bears the character of that of amateurs and enthusiasts.' I think you ought, in justice, to let your readers know that the drawings particularly referred to in the address were five in number. Of the series to which three of these belong, it is conspicuously said, in the accompanying report, that, 'as regards the bandage round his eyes,' the draughtsman 'sometimes pulls it down before he begins to draw.' The two other drawings belong to a series which the report says were executed while the draughtsman 'remained blindfolded.' But, if Professor Newcomb will himself try to reproduce these drawings with his eyes closed, he may perhaps be led to agree that their accuracy can hardly be deemed to fall outside the range attainable by the muscular sense alone, especially if aided by a little practice. To brand as dupes and enthusiasts (on the strength of this single 'acute observation') a set of gentlemen as careful as these English investigators have proved to be, seems to me singularly unjust.

WILLIAM JAMES.

Cambridge, Mass., Jan. 30.

Death of Father Gaetano Chierici.

Prehistoric archeology in Italy has just met with a most serious loss in the sudden death, on the 8th of last month, of Father Gaetano Chierici, professor in the college at Reggio, in Emilia, and director of the admirable Museum of antiquities, in that city. In association with Professor Strobel of Parma, and Professor Pigorini, director of the Ethnographic museum, at Rome, he founded, and has continued to edit, the *Bulletino di paletnologia Italiana*, a monthly journal of prehistoric science, now entering upon its twelfth year. Indefatigable in his prehistoric explorations, he is best known for his investigations of the remarkable *Terremares* of Emilia, which have established the existence of the age of bronze in that country. His last work was to superintend the excavation and transport to Reggio of several tombs from a very ancient cemetery discovered at Renedello, near Brescia. This seems to belong to a period of transition from the age of polished stone to a time when weapons of copper were used, anterior to the age of bronze. Chierici believed that they are remains of the ancient, obscure Pelasgic race.

It is proposed to place a simple bust to the memory of this modest and learned ecclesiastic in the museum which he so admirably arranged and illustrated, and of which he deserves to be called the founder. Con-