to this and that? These are the questions that come up for answer.

Into those questions we cannot here enter. Let it be sufficient for you, in this lecture, to have learned the names and characters of the simplest items of mental experience—of those items which are always and invariably present in our concrete, every-day experiences. Draw for yourselves an outline map of mind. You must make three countries, as it were, within that map. Ideas must go in in one color to the right; efforts in another to the left; and feelings will lie in the middle between the two. And you must suppose that each of these three territories has an independent government; but that their governments are very friendly, and often take joint action—indeed, that they hardly ever think of taking action of themselves. Especially must you conceive that both idea and effort have right of way through any part of the dominion of feeling; and that the communications are so open, and the relations so close, that scarcely anything can affect idea or effort, from the outside or from the inside, that does not also exert an effect upon feeling. The detailed survey of the three territories, and the laying down of roads through them for the student to follow—that is the further business of Psychology. E. B. TITCHENER.

LOSS OF PROFESSOR MILNE'S SEISMOLOGICAL APPARATUS, LIBRARY AND COLLECTION.

EVERY one interested in Seismology knows of the great work done by Professor John Milne, F. R. S., during a residence of nearly a quarter of a century in Japan, which country became, a decade ago, the earthquake lahoratory of the world. Through his interest, and that which he kindled in other foreign residents, the Seismological Society of Japan was organized about fifteen years ago. During its active existence its Annual Reports contained the most important contributions to Seismology anywhere published, and it is not too much to say that the work of this Society amounted to a revolution in the methods of observation and research. To its Transactions, Professor Milne was by far the largest contributor. When the rapid decrease of the number of foreign scientific men resident in Japan threatened the life of the Society, he tactfully enlisted the support and cooperation of the Japanese. The issue, by the University, of an extensive and valuable series of scientific memoirs, tended, naturally, to divert much of the active interest which they for a time manifested, and a few years ago the publication of the Transactions of the Seismological Society ceased. Professor Milne was not discouraged however, and at his own risk and expense at once substituted a periodical which he called the 'Seismological Journal,' which he has continued to issue at great pecuniary loss and which contains many valuable and important contributions to the science.

During all of these years, with a tireless and inexhaustible industry and a rare ingenuity of design and wealth of mechanical resource, he had invented, constructed and put into use a variety of earthquake detectors, recorders, measurers, wave and tremor registers and even earthquake 'avoiders' or 'nullifiers,' which, with the numerous devices and inventions of other foreign students of Seismology in Japan, the value of which he was quick to recognize and utilize, constituted a collection the like of which never existed before. Besides these instrumental appliances Professor Milne had accumulated an extensive and valuable library of Seismology, including many early and rare pamphlets and volumes and almost everything published on the subject during the past fifteen years.

His connection with the Japanese Government is shortly to terminate, and he had

prepared a complete equipment for an observatory to be set up in England on his return to that country, by means of which he hoped to show that earthquakes travel around the globe, and to be able to study them there.

Those who have been aware of all these facts, and all who are now made aware of them for the first time, will, I am sure, experience a feeling of great regret on learning of the destruction by fire on February 17th of practically all of these valuable accumulations of years of labor, together with personal effects of great interest and value to Professor Milne.

The observatory in which these things were, and which is now gone forever, was also an object of much interest in its relation to the educational development of Japan during the past twenty years. It was erected nearly that many years ago, a little before the close of Dr. Murray's connection with the Department of Education. It contained in the beginning a good but small Equatorial by Alvan Clark and a Transit. One end of it was used as a meteorological observatory under the direction of the writer during several years, being equipped with a good collection of self-registering instruments obtained mostly from London, the results of the use of which were published as Annual Scientific Memoirs by the authorities of the University. The transit wing was utilized by Professor W. S. Chaplin in his courses in Civil Engineering, until the Astronomical part of it was placed in the hands of Professor H. M. Paul, who served the University as Professor of Astronomy for several years, beginning in 1880. When a few years later the Engineering College became an integral part of the University and the whole was located in the Kaga Yashiki, the observatory was turned over to Professor Milne, an addition to it was built and he made a Seismological 'Laboratory and Bazaar' out of it, residing in a part of it. It was a comfortable bungalow sort of a structure, located in the Kaga Yashiki, just in the rear of the row of dwellings where, fifteen years ago, lived, beginning at the entrance to the Compound, Fenollosa, Mendenhall, Braun, Cooper, Morse, Chaplin, Ewing and Atkinson, all Professors in the University and exhibiting a mixture of American, Spanish, German, English and Scotch blood which illustrates the disposition of the young-old nation to get what it wants wherever it thinks it can find it. When it became the home of Professor Milne it became the source of a delightful hospitality which many 'globe trotters' of all lands have enjoyed, and thousands besides his scientific friends will sympathize with him in his great loss.

In a recent letter from Professor Milne he says:

"Just now you and Paul may be breathing all that is left of the old observatory and my belongings."

He sends me a characteristic and graphic account of the occurrence, 'prepared,' he says, 'for maiden aunts and relatives,' from which the following extract will, I am sure, be of interest to all readers:

"As nearly all the transactions of the Seismological Society were packed up to go to Europe, a few that had middle places in the boxes may be saved, but I doubt if even out of 2500 copies I shall get more than two or three hundred. All my old earthquake books, some of which even dated from 1500 to 1600, but which were perhaps more curious than useful, seem to have gone. One function they had was to inspire the globe trotter, or travelling clergyman, with respect for a science that was apparently so ancient. Amongst them there was a poem called 'the earthquake,' A. D. 1750, but I know that by heart. The new books were volumes of bound pamphlets in all sorts of languages which I had slashed out of the publications of all sorts of societies. Perhaps the burning of them was a visitation for my Goth-like behaviour.

Instruments were fused or vaporized. Sixteen specially constructed clocks which would turn drums once a day, once a week, or drive a band of paper for two years, together with seismographs and horizontal pendulums, self-recording thermometers and barome-

ters, microscopes, and a museum of old and new contrivances are now in the scrap heap. Until to-day, I felt I had the observatory I intended to put up in England completely furnished, and I was proud of the furniture.

One very cruel cut was the picking up of an insurance policy dated 1878, which fluttered out of the ruins. One reason that I have not insured for some years past is because day and night I always had for purposes of continuous photography open benzine lamps burning in my house, and I should have had to tell the agent about the little tricks they played when first I used them. It may sound odd, but I do not think a stranger to their ways can light one so that nothing shall happen during the next three days. Against eccentricities like these I insured myself by having above them a bunch of fluffy paper, which, if the lamp blazed up, was burned and burned its suspended string. This was followed by the falling of a lever, when an electric bell in my bedroom and one in the kitchen was set going.

Outside the door of the instrument room stood fire-extinguishers and a heap of rugs. From time to time I had 'fire drill,' going through the operation of turning up a lamp, burning the paper, ringing the bells, alarming everybody, and then putting out the conflagration—in fact, very much like what happens on ship-board, only I had real fire—which was easily extinguished.

But what happened was the unexpected; the fire broke out in the midst of a pile of wood in an outhouse, and this, with a nice wind blowing, on a Sunday morning, when there was no one near to help.

And now I have next to nothing—decorations, medals, diplomas, clothes, manuscripts, extending over twenty-five years, and everything else has gone up in smoke; still it is not altogether a misfortune.

I shall not have a sale, nor the worry of selecting amongst my accumulations; there will be no buying boxes and packing up, neither will there be any haggling with custom house officials, or trouble in collecting on an insurance policy. On the other hand, I shall have new clothes, and some time or other, I hope, new clocks and new instrumeuts, whilst what I have got is the knowledge that I have many sincere and kind friends. Their clothes don't fit, but the sympathy that they have expressed and the little things they have sent me tells me that I should never be homeless in Japan. Looked at in the right way; like an earthquake, a fire may, after all, be a blessing in disguise, but, of course, it is sometimes pretty well wrapped up.

Dies iræ, dies illa,
Solvet sæclum in favilla."

Professor Milne asks me to make public the loss of his address book and his desire to send to all to whom it may be due, copies of Vol. IV. of the 'Seismological Journal.' This, he says, is an unusually large number, and he hopes an unusually valuable contribution to Seismology—his 'expiring effort;' and he asks all to whom this volume should be sent to address him, care Japan Mail Office, Yokohama.

Out of the few hundred copies, more or less, of the Transactions of the Seismological Society of Japan, he will be able to make up some sets; and those desiring to obtain them should address him, care Geological Society, Burlington House, London. And finally, he earnestly desires to receive, in exchange or otherwise, copies of any papers on or relating to earthquakes, volcanoes, or earth movements in general.

I am sure that every one who can will respond to this last appeal and cheerfully do whatever is possible to assist Professor Milne to replace, as far as may be, the accumulations of a quarter of a century, converted into sunset-reddening dust in a few short moments. T. C. M.

CORRESPONDENCE.

THE IDEAL INDEX TO SCIENTIFIC LITERATURE.

TO THE EDITOR OF SCIENCE: Since you have been so kind as to ask me to contribute to SCIENCE my views as to how the plan of cataloguing scientific literature may best be accomplished, I venture to present the following considerations. It is probable that some of the ideas suggested are impracticable, and indeed that the plan is too extensive and unwieldly to be undertaken as a whole at the present time. The literature of science is so vast and the number of workers so great, the degree of specialization in modern work so intense and the participation in research so wide-spread over the world, that a really adequate and