49, pp. 356–357) to "Interlingua" or "Latino sine flexione" proposed by Professor Peano of Turin University, president of the "Academia pro Interlingua"? Many believe that Interlingua has all advantages of Latin without its drawbacks. A quotation from one of the circulars of the "Academia" follows:

INTERLINGUA sive LATINO SINE FLEXIONE

Hodie quasi omni auctore scribe in proprio lingua nationale. Multitudine de linguas in labores de interesse commune ad toto humanitate constitue magno obstaculo ad progressu. Ex patiente studio de intelinguista resulta evidente quod linguas de Europa habe numeroso vocabulo commune. Vocabulario internationale es in quasi totalitate latino, graeco incluso, et es documento de historia de nostro civilizatione. Grammatica pote es reducto ad pauco aut nihil. Plure anno de studio non suffice pro posside latino aut alio lingua nationale, pauco hora suffice pro lingua internationale. Interlingua es intelligibile ad primo viso aut quasi.

Some pamphlets on the question are available for distribution to any of your readers interested in the subject.

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PALEOLITHIC AND NEOLITHIC OBJECTS FROM EUROPE

THE undersigned has been granted a sabbatical year and sailed for Europe on September 13. He expects to visit prehistoric and neolithic sites in France, Belgium, England and Italy. During his travels he will secure from archeologists, museums or collectors type specimens illustrating the life of primitive man in these various countries. Two or three museums have asked him to obtain for them small exhibits. Readers of SCIENCE or museum curators who may desire European objects will please communicate with him at the below address and his secretary will forward the communication.

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SCIENTIFIC BOOKS

La Géologie Sismologique, Les Tremblements de Terre, Avec une préface de M. Pierre Termier, Membre de l'Institut. By COMTE FERNAND DE MONTESSUS DE BALLORE. Colin, Paris, 1924, pp. xiv and 488, 14 pls. and 114 figs.

THE posthumous appearance of the Count de Montessus's "La Géologie Sismologique" marks the completion of the seismologic trilogy, the first volume of which, "Seismic Geography," first saw the light in 1906 and was quickly followed by "Seismic Science" in 1907. With singleness of purpose the Count has pursued his studies throughout more than a score of years and was busy reading the proofs of this completing volume when he was stricken with his fatal illness. Undeterred, he continued to labor upon these proof sheets with his accustomed ardor until the very day of his death, nearly three weeks later.

Together these three massive volumes, well organized and written in a clear incisive style, comprise what is now known of the science of seismology. They stand alone in their field as a comprehensive work of generalization, and are likely long to remain so. When nearly a half century ago the Count was a resident of San Salvador on a military mission and first turned his attention to the earthquakes which so frequently racked that country, it could hardly be said that a science of seismology existed. The misguided centrum theory of earthquakes, due to Robert Mallet and dating from 1862, explained earthquakes as occasioned by an explosion of gases within a subterranean chamber (centrum), and the brilliant system of the Dutch physicist, Huyghens, had been cleverly made use of to follow the vibrations sent out from the supposed centrum. By many, however, earthquakes were still supposed to have their cause either in the atmosphere or in the changes of the moon. The part which the Count's own studies have had in dispelling all these erroneous notions is a dominating one.

In his "Seismic Geography" de Montessus showed on the basis of a comprehensive statistical study of the earthquakes of history, that about 95 per cent. of all known earthquakes have occurred within two great-circle belts, one circum-Pacific and the other intersecting the first at an angle of about 67 degrees and taking its course through Malaysia, the Mediterranean and the Caribbean. These zones de Montessus recognized as the Mesozoic geosynclines and as the belts of growing mountains of Tertiary and later periods. Such definite localization of earthquakes probably gave somewhat too great prominence to these belts and overemphasized a supposed immunity of the regions outside. Heavy earthquakes have indeed occurred in a few instances in the outside areas, such for example, as the great earthquake of the St. Lawrence Valley, February 5, 1663, the New Madrid earthquake of 1811 within the Lower Mississippi Valley, and the Charleston earthquake of 1886.

In his concluding volume, "Seismic Geology," the Count sets up a modified classification of earthquakes, apparently so as to include these neglected regions which have greater stability but lack entire immunity. He distinguishes two main classes: (I) glyptogenic

or geologic earthquakes, and (II) external dynamics earthquakes, which include volcanic and landslide earthquakes, both relatively unimportant. Under (I) are to be found practically all the great earthquakes of history, and these de Montessus subdivides into (1) epeirogenic, (2) tectonic or orogenic earthquakes and (3) epeirogenic and tectonic earthquakes.

The reviewer believes that neither in its plan nor in the allocation of individual earthquakes is the Count's classification satisfactory. The fact that the earthquake of Casamicciola (Ischia) in 1883 was centered on the flanks of the volcano of Epomeo does not show that it was volcanic in origin, for Cassamicciola is well known to lie at the intersection of dislocation lines. It is also difficult to understand why the earthquake of Assam in 1897 or various Chilian earthquakes should be placed in the epeirogenic class, since they occurred either within or close to the zones of mountain growth. The reviewer believes, moreover, that it will in most cases be found impossible to determine in how far epeirogenic movements in the sense employed by de Montessus may or may not be combined with orogenic ones; and that it would have been both simpler and more nearly correct to make of the glyptogenic (better, tectonic) class two subdivisions only, one called orogenic and connected with mountain growth, and the other epeirogenic and not so connected but related to block faulting *per se*.

The Count's isolation, because of his residence in Chili during the last eighteen years of his life when he was preparing the "Seismic Geology," imposed a handicap which was to a large extent overcome by his wide correspondence, by his large personal library and by his intimate familiarity with many European languages.

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LABORATORY APPARATUS AND METHODS

A CULTURE TUBE FOR USE WITH COLLODION SACS

IN the course of recent studies of bacteria, the associated growth of gas formers and non-gas formers was under observation. It was desirable to cultivate the organisms in the same medium separated by a collodion membrane. After several tests, the method of preparing permeable membranes, as described by Gates,[1] was followed. This method, if carefully followed, gives excellent results.

For anaerobic non-gas formers the V-shaped glass tubes as designed by Gates[2] were used. This apparatus, however, is unsuitable for cultures of gas formers. To meet the conditions of these gas producers it was found desirable to develop an apparatus as shown in Fig. I.

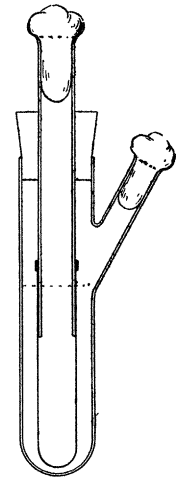

FIG. 1

The illustration shows a simple arrangement for the culture of bacteria and other micro-organisms on opposite sides of a collodion sac. These tubes have also been found convenient in experiments where a membrane is interposed between solid bodies and bacterial cultures as in the Noguchi method. They are convenient to handle and may be inserted into the common type of test tube stand. The side arm of the tube affords an easy means of inoculating culture media or withdrawing solutions from outside the sac, while material inside the sac may be reached through the glass supporting tube to which the sac is attached. These tubes may be used with either a rubber stopper or a cotton plug carefully fitted to the supporting tube and pressed into the larger tube.

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CADAVERA WITH FLEXIBLE JOINTS

THE rigidity of the joints of the cadaver as ordinarily prepared impedes the progress of the dissection. In the study of muscle action it is especially desirable to have a flexible specimen. In such a specimen the orifices of the body may be approached naturally. Any method resulting in flexibility should be of ready application and preferably should call for no great alteration in the preserving fluids used.

For the past thirty months the following simple method has given us satisfactory results. Upon bringing the cadaver into the embalming room the joints are manipulated so as to secure free and complete mobility. By steady traction each joint is once com-

[1] Gates, F. L., *Jour. Exp. Med.*, XXXIII, 25 (1921).
[2] Gates, F. L., *Jour. Exp. Med.*, XXXV, 635 (1922).