

the surfaces of the internal fracture within the plate.

Fig. 2 is a side view, and Fig. 3 an oblique view, of the internal fracture seen through the edge of the plate, the lower half of each picture being the image of the upper half formed by the reflection of light at the interior surface of the plate. The circular area of contact from the margin of which the fracture starts appears in Fig. 3 as an elliptic white disc at the centre. It seems clear that the internal fracture practically occurs along the surface of maximum shearing stress set up during the impact.

C. V. RAMAN.

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#### The Rigidity of the Earth.

AN account of an experiment to determine the rigidity of the earth was published in the *Astrophysical Journal* and in the *Journal of Geology*, March, 1914. This gave the ratios of the amplitudes of tides observed in N-S and E-W pipes to the amplitudes computed for the same pipes on the assumption of a perfectly rigid earth as 0.523 and 0.710 respectively.

The work of reducing a new set of automatically recorded observations made by an interference method, which was interrupted by the war, was recently resumed, and it was found that the N-S and E-W ratios were very nearly equal to each other.

It was then noted that  $0.523/0.710 = 0.7366$ , and that the cosine of the latitude of Yerkes Observatory, where the experiment was performed, is 0.7363. It seemed highly probable, therefore, that  $\cos \phi$  had been introduced erroneously into the computed formula for N-S tides.

We have just been informed by Prof. Moulton that he has gone over the old formulæ used, and has found that the computer introduced the factor  $\cos \phi$  erroneously into the N-S computation.

The N-S ratio should therefore have been  $0.523/0.7363 = 0.710$ , which, oddly enough, is exactly equal to the E-W ratio.

The new observations point to a value of about 0.69 for both E-W and N-S ratios.

A. A. MICHELSON.

HENRY G. GALE.

University of Chicago, September 10.

#### The "Flying Gallop" in Art.

IN NATURE of August 21 (p. 489) reference is made to a popular article by Mr. C. W. Bishop on "The Chinese Horse," and to the distribution of the artistic motive of the flying gallop dealt with in it. It may be of interest to remark that this problem was first studied and discussed by the famous French archaeologist S. Reinach in his "La représentation du galop dans l'art ancien et moderne" (Paris, 1901), and was afterwards expanded by me in my book, "Chinese Pottery of the Han Dynasty" (Leyden, 1909), where also many illustrations of the motive from Chinese art-works are given.

B. LAUFER,

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#### MUSEUMS, EDUCATION, AND THE BOARD.

FOR many years a number of our provincial museums have striven to make their collections of educational value, both to the ordinary citizen through their exhibits and guides, and to the schools through their exhibits and special circulating collections, as well as by talks to the teachers or pupils. The response of the educa-

tion authorities long continued disappointing, but some eight or ten years ago things began to move more rapidly. Certain pure educationists began to see that there was something of value for them in the museums, and in 1913 the Educational Science Section of the British Association appointed a strong committee to report on the question. The war, though unfortunately preventing the publication of that committee's lengthy report, and hindering museum activities in many directions, has had the result in some towns, notably Manchester, of inducing the schools to lighten their own troubles by seeking the aid of the museums and their staffs.

So well had the movement progressed, thanks mainly to the insistent propaganda of museum officials, individually and through the Museums Association, that at last the Education Act of 1918 and the draft suggestions for the arrangement of schemes thereunder (Circular 1096) took museums into serious account as an educational factor. Museum enthusiasts were delighted. But now comes a move which gives them pause. The Adult Education Committee of the Ministry of Reconstruction has issued an interim report (Cd. 9237) recommending that public libraries and museums should be placed under the control of the local education authorities, and administered by special committees of those bodies, and urging "that the powers and duties of the Local Government Board regarding public libraries and museums should be transferred forthwith to the Board of Education." So reasonable a recommendation would, it is doubtless expected, be welcomed effusively by the institutions concerned. The contrary is the case. The protests of the librarians are quoted—and dismissed—in the interim report itself. They have just been repeated at the meeting of the Library Association in Southport, but we cannot consider them here. As already reported (NATURE, July 17, 1919, p. 394), the Oxford meeting of the Museums Association raised so many objections that it appointed a committee to prepare a statement. And now, in a discussion of the Educational Science Section of the British Association, the opposition of the museums found vigorous expression, and such support as the proposal received from one or two curators was only half-hearted. It may be well, therefore, to summarise the arguments.

The Adult Education Committee holds its opinion so strongly that it has condescended to very little argument. We gather more from a paper laid before Section L by Prof. J. A. Green. This assumes that museums are "fundamentally educational in character," and infers that they should form part of the educational machinery of the country. This machinery should be controlled by one authority, and its parts adapted to a common aim. This would change the outlook of the museums and lead them to display their collections in such a way as to dispel "museum headache." The responsibilities of the Education Committees have been extended to adult education, and they would be better able to bring museums