

four hundred dollars. The holder is expected to give twenty hours a week to the work of the laboratory, and to devote the remainder of the time to original investigation in histology or embryology under the supervision of the senior officers of the department. Applications should be addressed at once to Professor Charles S. Minot, Harvard Medical School, Boston.

DISCUSSION AND CORRESPONDENCE.

PRE-COLUMBIAN MUSIC AGAIN.

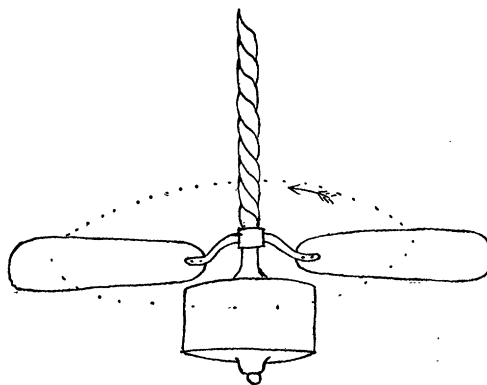
TO THE EDITOR OF SCIENCE: The question of pre-Columbian stringed instruments of music in America comes up again, this time from Carl Sapper, the distinguished geologist in Coban, Guatemala. He had learned of my former letter on the distribution of the musical bow and concedes with regard to the *Loltun Hool*, of the Mayas, that it was surely introduced from Africa, since the Kekchi call it *marimbadie*, or *caramba*. The same instrument is in use among the Xicaques, in Honduras, but they attach a *guacal* as a resonator. Dr. Sapper does not agree with me that the stringed musical instrument was entirely absent from the western hemisphere, for, says he, the Lacandones have a two-armed guitar, which he thinks not to have been borrowed. The Kekchi also, says Sapper, uses strings on the scraping instrument, called 'su.' This is entirely new to me. As to the double-necked guitar, Mr. E. H. Hawley says that they were common in Europe and may be seen in collections. These have the necks projecting from the same end and parallel or slightly diverging. The Fans have a variety in which the two necks start from opposite sides of the body. One example is made from the stem of a palm leaf 55 inches long. Four strings are cut from the outer skin, their ends being left attached. A little way from the middle a stick is set up perpendicular to the palm stem. On one margin of this are cut four notches or steps, about half an inch apart, to receive the strings. Braided bands of palm fibre encircle stem and strings, and by moving these the latter are tuned. Opposite the upright stick or bridge is tied an open gourd for resonator. I should be glad to receive descriptions of these Central American

instruments or drawings. Most of all, would I like to examine specimens. If by the scraped instruments Dr. Sapper means some modification of the notched fiddle, then he has found a prize, but not necessarily a pre-Columbian one.

O. T. MASON.

A CURIOUS OPTICAL ILLUSION CONNECTED WITH AN ELECTRIC FAN.

A CURIOUS illusion connected with an ordinary two-winged pendant fan, such as are commonly employed in restaurants, barber shops, etc., attracted my attention some years ago, and lately, upon my return to the same place, was just as evident as formerly. Very much at a loss for an explanation, the phenomenon was described to one of our leading psychologists and educators, but no satisfactory explanation was obtained. Hence, it is supposed that possibly the phenomenon has not been noticed by others, and is described here for the benefit of those concerned and with the hope of drawing out similar observations by others.



The illusion consists in the fan appearing to rotate in the opposite direction from the real one. Sitting some thirty feet away and looking at the fan, which is moving at a moderate speed, it is plainly seen to be moving in the direction opposite to that of the hands of a watch. The plane of rotation appears to be horizontal. But as one continues looking the vanes suddenly seem to move in the opposite direction and the plane of rotation to change so as to incline towards the observer. The change is under the control of the will and may