been done by Zapotecan Indians have been found within an oddly-shaped tomb, apparently guarded by a headless skeleton. Paintings in red, green, and yellow cover the front of the tomb. There are more underneath the lintel, on the door jambs, and on the stone floor of the entrance.

Already, the archaeologists have identified those on the lintel front as Zapotecan picture writings dealing with the calendar. The central one is read as "Twelve Flower" which was either the name or the date, as Mexican Indians were called after their birthdays. Other picture writings painted on the tomb represent year and day names in Zapotecan or in Mayan.

Science News Letter, December 3, 1932

ENGINEERING

Sand and Weather Affect Life of Auto Tires

WHEN a visiting motorist tells about the good mileage his tires give him, which happens to be a better figure than you can boast for your own car, do not immediately become disgruntled with your dealer and the kind of tires you are using.

For sand and weather may be the cause of the mileage difference.

Suppose you live in Florida, and the visitor in Akron, Ohio. Because the sand used in making roads in Florida is sharper than that near Akron, the tread of your tires will last only 60 per cent. as long as in northern Ohio. This is the estimate of Burgess Darrow, manager of the development department for the Goodyear Tire and Rubber Co., which was given in a paper read before the Society of Automotive Engineers.

Mr. Darrow stated that tires of the Arizona motorist, whose roads are built with smooth desert sand, will last 60 per cent. longer than those of the Akron resident. Thus, for all sand has to do with it, tire mileage in Arizona is almost three times as great as in Florida.

But sand is not the only thing that causes tires to wear. The temperature at which a tire operates has a lot to do with the length of its life. Mr. Darrow's paper estimated that motorcoach tires which give 28,000 miles in such northern states as Ohio, Michigan and Minnesota will last for only 20,000 to 22,000 miles in the South.

It was also pointed out that hills and curves have an important effect on tread wear.

Science News Letter, December 3, 1932

BIOGRAPHY

A New Introduction to The Father of Bacteriology

IT IS NOT OFTEN that one can meet a modest but great explorer of a new world who was born 300 years ago, yet Clifford Dobell, F.R.S., protistologist to the Medical Research Council, London, arranges the introduction pleasantly in his erudite and charming volume: Antony van Leeuwenhoek and his "Little Animals" (Harcourt, Brace and Co.).

A draper by trade, Dutchman by nationality, maker of lenses and inquisitor of the microscopic world by desire, Leeuwenhoek was the father of protozoology and bacteriology. Devoting only spare time to the "very little animalcules" that he probably first found in the water of an inland lake in 1674, he reported all his interesting observations in letters to the Royal Society of London, which was not very old at the time. His famous "Letter on Protozoa," his eighteenth scientific epistle to the Royal Society, dated "Delft in Holland, 9th October 1676," has been translated by Dr. Dobell in full for the first time. This will amaze the thousands of scientists who are studying the protozoa and bacteria that Leeuwenhoek first saw. Only a part of the letter was published in the Philosophical Transactions in 1677 as "English'd" by the energetic and first Royal Society secretary, Henry Oldenburg. This famous document, still preserved in the Royal Society's archives, has been long regarded as the first paper ever written upon protozoology, and Dr. Dobell, who patiently translated it out of its difficult Dutch script, discovered that it also contains the first account ever written of the bacteria as well as many other original observations.

With rare discernment the Royal Society elected Leeuwenhoek a fellow. It must be remembered that he was a Dutchman and not long since England and Holland had been at war. This international rapport in science has a lesson for today, as Dr. Dobell interprets:

"In reintroducing plain Mr. van Leeuwenhoek, the Dutch draper and amateur micrographer, I want also to impress upon you that there are still blood-brothers in every different nation. Barriers erected by birth and prejudice and education are blown sky-high before the fire of common human aims and interests. Language and land and lineage are no bars to mutual and native understanding. An honest man in any country is linked to all other honest men in all other countries. When a true man like Antony van Leeuwenhoek is born, the heavens are opened. Even when he dies he is not dead; his spirit glows with the divine light forever, and will forever be seen and understood—somewhere, sometime, by somebody. No Princes, Popes, politicians, or even prophets, can unite mankind in universal brotherhood; but the disinterested and simple men everywhere can (and perhaps eventually will) unknowingly draw warring nations together, and may ultimately save humanity from the fate of the Triassic reptiles."

Science News Letter, December 3, 1932

SEISMOLOGY

Gulf of Tartary Gets Second Earthquake Shock

THE REGION around the Gulf of Tartary, off the coast of eastern Asia, got its second earthquake shaking in a fortnight just before midnight on Friday, Nov. 25, according to calculations made by the Jesuit Seismological Association, based on data gathered by Science Service.

The time of origin was about 11:30 p. m., eastern standard time, and the epicenter was in latitude 48 degrees north longitude 141 degrees east. On Nov. 12, an earthquake had been recorded from the same region.

Science News Letter, December 3, 1932

A shipment of mercury large enough to supply 50,000,000 ordinary thermometers—the commonest use of mercury—has arrived in New York to be used by the General Electric Company in generating power in a new 20,000 kilowatt mercury turbine in New Jersey.

The Field Museum has on exhibit the only complete skeleton ever discovered of the prehistoric South American ground sloth, *Pronothrotherium.*