

other necessary expenses of such preparation. The editor requests suggestions concerning future volumes, and cooperation in their production.

### UNIVERSITY AND EDUCATIONAL NOTES

AMONG appropriations announced by the General Education Board are: Northwestern University, toward \$2,000,000, \$600,000; Boston University, Boston, Mass., toward \$1,500,000, \$400,000; Illinois Wesleyan University, toward \$400,000, \$135,000; New York University, \$500,000, toward \$1,500,000; for the discharge of its outstanding obligations, \$500,000.

DR. FREDERICK L. HOFFMAN has accepted the position of dean of what will probably be known as the "Graduate School of Applied Business Science, of the Babson Institute, at Wellesley Hills, Mass. Dr. Hoffman will continue his connection with the Prudential Life Insurance Company as consulting statistician, and will hereafter divide his time as may best meet the needs of his new work. In his new position he is expected to develop the business education for officers and managers of industrial undertakings, including insurance. The plans under way include an entire group of new buildings, and a museum of industrial products and processes. Dr. Hoffman will make his future home at Wellesley Hills.

DR. SIMEON BURT WOLBACH has been appointed Shattuck professor of pathologic anatomy in the Harvard Medical School, to fill the vacancy caused by the retirement of Dr. William T. Councilman.

LEIGH PAGE, Ph.D., assistant professor of physics in Yale University, has been promoted to be professor of mathematical sciences beginning with the academic year 1922-23, with assignment to the Sheffield Scientific School.

THE chair of mining at Sheffield University, vacant by the death of Professor F. E. Armstrong, has been filled by the appointment of Mr. Douglas Hay.

DR. HENRI CLAUDE has been appointed professor of mental diseases in the Paris Faculty

of Medicine in succession to the late Dr. Ernest Dupré.

### DISCUSSION AND CORRESPONDENCE

#### THE VOTE ON THE EVOLUTION BILL IN THE KENTUCKY STATE LEGISLATURE

ON March 9, the lower house of the Kentucky legislature, contrary to what was expected, took the anti-evolution bill (the one carrying a heavy fine and jail sentence for a violation of its provisions) out of the hands of the committee and put it to vote. Not since the memorable election of William A. Bradley to the Senate in 1908 has there been in the legislature such intense interest in the result of a ballot. As names were called the majority for and against saw-sawed with narrow margins, and there was much scurrying hither and thither by the advocates and opponents of the bill for the purpose of finding and dragging in their respective absentees for the vote. It was like a neck and neck horse race, and Kentuckians do dearly love a horse race. The final ballot resulted in 41 votes for the measure and 42 against.

An analysis of the vote above recorded shows that with the legislative district taken as a unit and computing the percentage of illiteracy on the basis of the male population, twenty-one years old and upward, in each, the advocates of the bill represented an illiteracy of 13.5 per cent., and the opponents of the bill an illiteracy of 10.7 per cent. The illiteracy of the state as a whole computed on the same basis is 11.3 per cent.

In view of the closeness of the vote on this measure and what an analysis of it reveals as to the forces which were backing its passage, the proposal that the content of teaching in the state universities shall be dictated by legislative enactment, as advocated by Mr. Bryan, is fraught with interesting possibilities.

As interesting incidents connected with the final attempt to pass this anti-evolution measure, are the following:

Two persons, not members of the assembly, were permitted to address the house on the measure, President McVey of the university against it and Rev. Noel Gaines, of Frank-

fort, in favor of it. The latter exhibited standard text-books on zoology, and grew quite excited as he quoted evolutionary statements from them.

A representative, whose vote against the bill made it a tie, called up his pastor by long distance telephone, while the balloting was yet in progress, and asked for advice as to how to cast his final vote.

The representative from Breathitt County, one of the counties of the mountain section, where anti-evolution sentiment is strong, surprised everybody by voting against the bill; indeed it was he who cast the deciding ballot. This county is known as "Bloody Breathitt," because of its distinctive lead in homicides growing out of private feuds. This member can scarcely be said to represent the sentiment on evolution in this county, which has an illiteracy of 21.6 per cent. It is doubtless more correctly represented by the editor of the *Jackson News* of that county, who recently said, "The professors at the state university may believe they are descended from apes and baboons, but let it be known that the good people of Breathitt are pure Anglo-Saxon."

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### ROTERTIA

In the mind of the student the word "moment" is unalterably connected with the idea of a very short space of time. Such an expression as "moment of force" is, therefore, on the face of it, meaningless. It is useless for the teacher to point out that "moment" also means importance, and that the moment of a force is merely its importance or effectiveness in producing rotation. Calling it a "moment of force" makes "a tendency to produce rotation" a difficult physical conception for the student to grasp. This difficulty has been recognized by teachers of physics, who have at last very generally discarded the expression "moment of force," in favor of the shorter, simpler, and clearer term "torque." A torque is a twist. There you have the whole thing in

a nut-shell, and the student knows what you are talking about.

Why not keep up the good work by accepting suitable substitutes for "moment of momentum" and "moment of inertia" as well? If "moment of force" is bad, these are worse. Some text-book writers have already seen the wisdom of using "angular momentum" for "moment of momentum." This is a distinct improvement, since "angular momentum" carries its meaning on its face. But so far I have failed to find any serious attempt made to use a substitute for "moment of inertia," although, to my mind, this is the worst offender of the three. The magnitude of a moment of force is calculated by multiplying a force by a distance ( $f \times r$ ); similarly that of a moment of momentum by multiplying a momentum by a distance ( $mv \times r$ ); but the magnitude of a moment of inertia is *not* equivalent to the product of an inertia times a distance ( $m \times r$ ), but times the square of a distance ( $m \times r^2$ ). The use of the word "moment" in all three cases, therefore, misleads the student to expect an analogy which does not exist in the case of moment of inertia, thus making the term particularly inappropriate. My experience has been that the word "rotertia" immediately conveys to a student the physical conception buried in the expression "moment of inertia"; and in such a way that it is not easily forgotten. I therefore seriously urge its adoption. "Rotertia" on the face of it is equivalent to rotational inertia; and, hybrid though its stock may be, what more can we demand of a technical term than unambiguity, clarity, and force?

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NOVEMBER 14, 1921.

### THE VALUE OF TILTH IN AGRICULTURE

DR. JEROME ALEXANDER (in *SCIENCE*, February 10, 1922) criticises a statement made by the present writer (*SCIENCE*, September 2, 1921) that "the comminution of the surface of the soil, *more or less perfectly stops evaporation and thus conserves the store of soil water.*" This statement is said by Dr. Alexander to be "quite contrary to all engineering