gravitation that we can explain further. It is the real definition of mass, and (3) is a useful additional postulate, or a useful experimental fact.

So far as ease of thinking is concerned, which is more or less irrelevant, force and acceleration are far more easily grasped than mass. That is to say, it appears so to the writer; but Frederic Soddy[3] says: "the conception of force and its pseudo physical reality undoubtedly delayed for centuries the recognition of the law of the conservation of energy. Only what is conserved has the right to be considered a physical existence. In other branches of science, the conception is a stumbling block and a delusion." Perrin takes a radically different view. There seems to be a certain mysticism in Soddy's contention, for what do we care whether a force goes on "existing" when we finish with it? We find velocities and temperatures convenient, yet they go out of "existence" without any special regret. The main fact is we can give numbers to these forces, temperatures, etc., and make equations that correspond (somewhat) to experiments.

Mass, on the other hand, means (1) inertia. (2) capacity to be attracted by a gravitational field (3) capacity to create a gravitational field, and some other things. It appears to depend on velocity, though it is not intended to consider non-Newtonian mechanics. It is about as puzzling a thing as there is in physics —for who knows what gravitation is?

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NONSILVERABLE CONTAINERS FOR SILVERING MIRRORS

IN the ordinary process of silvering glass mirrors by chemical decomposition (*e. g.*, Brashear's method) the metal is deposited upon the glass container. In this manner a great deal of silver which might have added to the thickness of the mirror is lost. This is an important item when silvering mirrors 25 cm. or more in diameter.

The object of this note is to call attention to the usefulness of ordinary, "granite ware," enamelled iron pans, which do not attract the silver and hence increase the supply of material available for deposition on the mirror. This was observed some years ago, but its importance was not very apparent. However, during the past year the writer has had frequent opportunities to verify this observation and to apply it in producing thick deposits of silver on glass.

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BUREAU OF STANDARDS,
September 9, 1918

QUOTATIONS

SCIENTIFIC WORK IN INDIA

THE Board of Scientific Advice for India has, like similar bodies elsewhere, felt the effect of war conditions. The board has been strengthened by the addition of a representative of the Indian Munitions Board, and power has been conferred upon the president to appoint subcommittees, membership of which need not be confinel to members of the board, for the purpose of dealing with particular investigations. The board has found it necessary to modify the treatment of programs of work submitted by individual scientific departments, and to resolve that the annual report for 1916–17 be confined to a brief statement of work actually done during the year, also that the bibliography of publications bearing on particular subjects be consolidated. But the establishment of a Zoological Survey recorded for the year under notice, has not affected the composition of the Board of Scientific Advice, representation of this subject having been provided for already. That its organization should have been so slightly affected affords striking evidence of the soundness of the original constitution of the board.

The report of the board for 1916–17 is an interesting document, and much of its contents, especially where the applications of science are concerned, may repay perusal outside India. In agriculture the low values of

[3] "Matter and Energy," New York, 1912, p. 108.