

# SCIENCE

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IN THE *Contemporary Review* for July is an interesting article by Frances Power Cobbe on 'The Scientific Spirit of the Age,' one portion of which, at least, expresses our own views on the subject, and we presume that of others. She says, "The political press has adopted the practice of reporting the details of illness of every eminent man who falls into the hands of the doctors, and affords these gentlemen an opportunity of advertising themselves as his advisers. The last recollection which the present generation will retain of many an illustrious statesman, poet, or soldier will not be that he died like a hero or saint, bravely and piously, but that he swallowed such and such a medicine, and perhaps was sick in his stomach. Death-beds are desecrated that doctors may be puffed and public inquisitiveness assuaged." We believe, however, that the "political press" is more to blame for this than the "doctors." While it is true that some of these seize with avidity every such opportunity to bring themselves into notoriety, yet there are others (and these we believe are in the majority) who shrink from the publication of their opinions, and would oftentimes prefer to relinquish the case rather than to be brought forward so prominently before the public. It was a matter of deep chagrin to the late Prof. Frank Hamilton that his name figured so often in the public press while he was in attendance upon President Garfield during his fatal illness. The position of a physician who is in attendance upon an illustrious personage is a most trying one. The public demands professional opinions; and, whether the physician communicates them to the representatives of the press or withholds them, he is equally condemned. Miss Cobbe would place the medical profession under great obligations if she would indicate just what course its members should follow under these circumstances.

AT THE LAST MEETING of the New York Academy of Sciences, Dr. A. Julien and Prof. H. C. Bolton gave a report of the interesting results of their long-continued researches on sonorous sands. The cause of this remarkable phenomenon, which was first known to occur in Arabia, has long been a mystery. In course of time many other localities in which sonorous sands occur became known, and, in fact, it may be found almost everywhere on beaches and in deserts. The authors collected samples from all parts of the world, and, on close examination, found that all sonorous sands are clean; that no dust or silt is found mixed with the sand; that the diameter of the angular or rounded grains ranges between 0.3 and 0.5 of a millimetre; and that the material may be siliceous, calcareous, or any other, provided its specific gravity is not very great. When these sands are moistened by rain or by the rising tide, and the moisture is evaporated, a film of condensed air is formed on the surface of each grain, which acts as an elastic cushion, and enables the sand to vibrate when disturbed. In sands mixed with silt or dust, these small particles prevent the formation of a continuous air-cushion, and therefore such sands are not sonorous. If this theory be correct, sonorous sand must become mute by removing the film of air. Experiments of the authors prove that by heating, rubbing, and shaking, the sand is 'killed.' All these operations tend to destroy the film of air condensed on the surfaces. On the other hand, samples of sonorous sand were exhibited which had been kept undisturbed for many years. They had retained their sonorousness, but, after having been rubbed for some time, became almost mute. The theory advanced by the authors appears very plausible, and will be

firmly established when they succeed in making a sonorous sand. Their experiments in this line have not yet been completed, but promise fair success.

## MEDICAL LEGISLATION IN NEW YORK.

IT is more than probable that additional legislation will be sought from the next Legislature of New York to control the practice of medicine. Mr. W. A. Purrington, counsel for the Medical Societies of New York County and State, recently read a paper before the American Social Science Association on the extent to which legislation can aid medical education. Legislators will do well to study this paper before introducing any new laws pertaining to the subject. Mr. Purrington thinks that a responsible board should be created, that will have in charge the arrangements of quarantine and sanitation, and also the licensing of medical practitioners of every sort; for he contends that the dentist and the pharmacist should be recognized as medical men. All that legislation can do to aid medical education he believes can be summed up as follows:—

I. By fixing a minimum age under which they (physicians, dentists, and pharmacists) will not be allowed to practise their calling.

II. By requiring of each of them a fixed term of study of certainly not less than two graded years, leaving to the board the care of details.

III. By requiring proof by examination or certificate that each candidate for license had studied, before beginning his professional course, at least those branches in which law students are examined in this State before they commence their legal studies.

IV. By declaring that no medical schools (including in the term schools of dentistry, pharmacy, and midwifery) shall be incorporated by special act, and providing a general law for the incorporation of such schools, only upon proof made of the possession by the incorporators of sufficient capital—say, not less than a hundred thousand dollars—and a teaching plant, to justify the belief that the school will be capable of exercising faithfully its franchise. Such an act should contain stringent provisions for its own enforcement and for the forfeiture of abused charters.

V. A minimum course of medical study should be prescribed, in which a grade of at least seventy per cent should be attained on examination. The regulation of all details of the examination should be left to the board. But the topics in which the examination should be had might well be specified in the statute. It might be well to omit the topics of therapeutics and materia medica, upon which all medical heresies have been begotten by unscientific minds, inferring that one who should creditably pass his examinations in botany, chemistry, physics, anatomy, surgery, physiology, hygiene, diagnosis, obstetrics, and microscopy, especially if his clinical examination should show him to be educated in a true sense to observe and draw sound deductions from observation, might be trusted to form his own conclusions and pursue his own studies as judgment should dictate in the field of therapeutics. The law can have nothing to do with medical theories. The utmost it can do successfully is to prescribe that none shall practise medicine except persons educated in those branches of science that all admit are essential to an understanding of morbid conditions of our species, and possessed besides of a fair general education.

VI. Finally, the law should not recognize any diploma as of itself conferring a right to practise medicine: even if the possession of such document should be required as an antecedent to examination by the health board, it should not be allowed to take the place of such an examination. Any scheme of medical legislation will hereafter embrace that great safeguard against imposture and efficient tracer of frauds, the system of registration, where no one is allowed to practise medicine who has not made a public record, under oath, of his name, origin, and credentials for a license.