been thought wise to hold a convention for studying how best to manage the sanitary interests of cities and towns so affected. Every person interested directly or indirectly in this important subject is earnestly requested to be present and assist in discussing the papers, and add whatever information he can to the solution of these practical and most important questions, affecting as they do the health and lives of thousands of citizens of these three great commonwealths annually.

CHOLERA AND EUROPE. — The epidemic of cholera which has for so many months been raging in the valleys of the Tigris and Euphrates and the interior of Mesopotamia has also made considerable inroads into Persia. Reports of the epidemic having crossed the western boundary of Persia have been heard from time to time; but it has now been announced to the Faculty of Medicine of Paris, that there has been an alarming increase of the disease in central Persia and on the Turko-Persian frontier, and that the inhabitants are fleeing toward the north. All those who can afford the journey are trying to reach the Russian ports on the Caspian. Remembering that this is the route into Europe which the cholera has so frequently taken, the announcement, says *The Medical and Surgical Reporter*, must be regarded as one of great gravity.

MENTAL SCIENCE.

THE RAPIDITY OF MENTAL PROCESSES IN INSANITY. — The fact that the change in the mode of responding to the stimuli of the environment, characteristic of a disturbed mental equilibrium, will reveal itself in things important and trivial, has often been emphasized and illustrated. In this respect a comparison of the time required for performing simple mental operations in the insane with similar times in normal individuals is interesting, especially if we take account of the nature of the disease. The chief point in such an investigation is to secure a fair comparison, — a desideratum which former studies have not sufficiently taken into account. The most recent contribution to this field comes from a lady (Marie Walitzky, *Revue Philosophique*, December, 1889), and furnishes interesting results, based upon a sound method. She has chosen for her subjects men of good education—physicians, military officers, bankers, etc.—suffering from mental disease, and compared the times they require for executing certain mental processes with the times required for the performance of the very same processes, tested by the same apparatus, under the same conditions, by healthy physicians and other intelligent persons. The subjects were three persons suffering from paralytic dementia,—a case of remission after intense maniacal excitement; a case of general paralysis (in the initial stage of excitability); and another case observed at two different stages (in the period of remission, and in a state of maniacal agitation). Experiments were also made upon another patient whose disease is not altogether clear, and who was in a condition very nearly normal. The preliminary stages of practice were overcome; though times differing largely from the average always occurred, and had to be rejected. The processes studied were (1) the simple re-action time (with each hand) to a sound; (2) a choice of re-action, re-acting with the one hand to a loud sound, and with the other to a low one; (3) the re-action to a spoken word; (4) the ordinary association of one word with another; (5) the addition of one number to another. The associations were further distinguished as external, e.g., *flour-hour*, *mouth-nose*, in which the link was not logical, but rather accidental; internal or logical associations, such as *table-round*, *house-dwelling;* and assocations fixed by habit, such as *pater-noster*, *Adam-Eve*. Of course, these distinctions are neither absolute nor always easy to apply, and the same association may take place differently in different persons. Each average for each subject is founded upon about a hundred and fifty observations. The most important conclusions are the following: in the three cases of paralytic dementia the simple re-action time is lengthened, .225, .388, and .364 of a second; while in the average of five healthy individuals this average was .188 of a second; while in the other cases, mainly conditions of remission, no essential difference exists, the average time being .201 of a second. The difference in the time of re-action to a weak and to a strong stimulus is about the same in sane and insane, except in the two most pronounced cases of paralytic dementia, where the additional time needed to re-act to a slight stimulus is one-tenth of a second or more. The choice time is (and a similar relation holds of the other times) often three or four times as long in the paralytic dementia as in sanity, but approaches, though it is far from reaching, the normal in the states of remission: dementia, .816 of a second; remission, .629 of a second; normal, .364 of a second. The re-action to words is markedly longer than the normal only in the severest case of dementia, .864 of a second; normal, .285 of a second. The association time is most lengthened in a state of remission approaching melancholy, 1.377 seconds; in the state of remission, as in paralytic dementia, it approaches the normal, .898 of a second (normal, .680 of a second). In mania this time is shortened, .263 of a second. In those cases in which the patient was observed in two different stages of the disease, the same result is confirmed: the association time diminishes, and the choice time increases, as the maniacal agitation becomes more pronounced. The observations respecting the nature of the association are too limited to be separately discussed. These results suggest to the authoress the view, that, granting a reduction in association time to be dependent upon the faculty of unconsciously reproducing the associations fixed in the memory, the automatic function of the mind is increased in the initial stages of mental impairment, and that, parallel with this increase of mental automatism, the activity of the will decreases, its processes being slower. As the intellectual powers fade, the automatic functions also become slow, and finally even the perception of the simplest impressions is slackened. In the period of remission, even at its best, the mental powers do not fully recover: the automatism of the brain becomes normal, but the recovery of the will is incomplete.

A CURIOUS MENTAL TRAIT.—A correspondent of the German Anthropological Society tells of his meeting a farmer by the name of Löwendorf, who had a peculiar habit of writing "Austug" for "August," his Christian name. Some years later he was inspecting a school, and heard a little girl read "leneb" for "leben," "naled" for "nadel," and the like. Upon inquiring, he found that her name was Löwendorf, and that she was a daughter of his former friend the farmer, now dead. This defect was noticeable in the speech and writing of both father and daughter. It appeared in the father as the result of a fall that occurred some time before the birth of his daughter.

NOTES AND NEWS.

WE regret to announce the death of Gustave-Adolphe Hirn, the eminent physicist. He died at Colmar on Jan. 14, in his seventy-fifth year.

— A new kind of butter is now being made in Germany from cocoanut-milk. The Calcutta correspondent of the London *Times* says that the cocoanuts required for this industry are imported in large numbers from India, chiefly Bombay, and that the trade seems likely to attain still greater importance.

— Special attention was called by the United States Hydrographic Office to the unusually early southward movement of ice. Already (Feb. 1) thirty-six reports have been received of ice sighted since Jan. 5, and the positions and dates indicate that the ice season is one of the earliest on record,— nearly a month earlier than usual. This is undoubtedly due in large part to the prevalence of severe northerly gales east of Labrador, coincident with the heavy westerly gales of December and January along the transatlantic route. Masters of vessels should keep well clear of the Grand Banks for a few months, till there is less danger from icebergs and field-ice.

— Professor S. P. Langley, in a paper on the "Temperature of the Moon," in the December *Journal of Science*, states, that, of