

MEDICINE

Lister Memory Honored

This spring medical men everywhere, and throughout Great Britain and the United States in particular, will commemorate the centenary of Lord Lister, the man who laid the cornerstone of modern surgery.

During the week of July 15-23 British medical men will hold a celebration in conjunction with the 95th annual meeting of the British Medical Association, which will be attended by representatives from American institutions as well.

When a man dabs iodine on a specimen of facial razor carving and when mother washes a gash in Johnny's leg with a solution of phenol, they are paying unconscious tributes to the shade of the great English surgeon.

Joseph Lister was born on April 5, 1827, at Upton in the county of Essex. He received his medical training at London and Edinburgh and in 1860 became professor of surgery at the University of Glasgow, where most of his greatest contributions to science were made.

Great as were the possibilities opened up by the use of anesthetics in the middle of the nineteenth century, the battle of surgery was only half won. In spite of every precaution wounds would become infected and hospital records of amputations show that sometimes as many as forty-five per cent. of the cases with such operations would die. While studying the prevalence of such surgical pests as septicemia, tetanus, and the hundred and one pus infections that open wounds are heir to, Lister came across some of the work of Pasteur. Immediately grasping the explanation that such infections were caused by the then almost unheard of organisms called bacteria, he set out straightway to find a way to destroy the microorganisms in wounds that would not harm the body tissues. The heat sterilization recommended by Pasteur in his work in those pioneer days of bacteriology was not applicable here, so Lister turned to chemicals. After trying out several he lighted on carbolic acid, possessed of germ killing properties but not strong enough to injure the flesh of the wound.

His theory worked and, in spite of the criticism almost invariably heaped upon any new method at first, modern surgery is based on his idea of keeping wounds free from

sepsis. To quote the Journal of the Medical Association, "The triumphs of antiseptic and aseptic surgery are the renewed reminders and the lasting monuments of the great achievements of the British surgeon."

He was the first medical man to be raised to the peerage and shares with Pasteur the rare distinction of having received general popular acclaim and appreciation in a degree seldom accorded to workers in any field of science.

Science News-Letter, April 9, 1927

MINERALOGY

Record Borax Deposit

The discovery of some eight million tons of an entirely new mineral all in one huge deposit in Kern County, Calif., has set a record in modern mineralogy. The mineral is "rasorite" named after its discoverer, C. M. Rasor, leading borax engineer of the Mohave desert field. While new minerals in small quantities turn up once in a while in various parts of the world, it is unusual for so vast a quantity of an entirely new natural chemical substance, and a valuable ore at that, to be so long overlooked.

Rasorite is known to chemists as the tetrahydrate of borax. As freshly mined, it emerges in striated crystalline bars of glassy texture, some as large as common stovewood. It requires only a recrystallization with an added quantity of water to yield commercial borax, whereas all other important borax ores such as colemanite and ulexite require expensive chemical processes with resulting high prices of the product.

According to chemical theory, the natural rasorite is a substance which cannot be produced under the ordinary atmospheric pressure of fifteen pounds to the square inch, and thus had never been observed either in formations on the surface of the earth or in the synthetic laboratory. Great pressure due to an over-layer of lime borate and desert sediment has permitted the formation of the unique compound far below the surface of the Mohave desert. The deposit is located almost on the Kern-San Bernardino county line a few miles northwest of Kramer, Calif., and thus near the transcontinental line of the Santa Fe to San Francisco. The supply in sight is enough to meet the needs of the United States for over fifty years at the present rate of consumption.

The market price of borax, already sagging from keen competition among California and Nevada corporations, seems to be headed decidedly down-

ward as the new branch railway line to the rasorite mines nears completion. Borax is used extensively in enamels, welding fluxes, laundry materials, etc., but its application in the almost unbreakable borosilicate glass promises the most conspicuous new benefits. At present a few bottles, pitchers, baking dishes and other vessels of this glass are marketed at high prices, but if borax, the critical ingredient, should go below forty dollars a ton there will likely be a much wider use of the new glass. Borosilicate glass, composed largely of sand and borax, expands but slightly on heating and thus will stand boiling water and even oven temperatures without cracking.

As now constituted, fruit jars and milk bottles offer a fertile field for improvement. Unfortunately, the manufacturers of bottles will have to be shown why they should make an unbreakable bottle and thus have no opportunity to sell replacements. The dairyman passes on the responsibility for cracked glassware to his deliveryman and customers, and so he has not yet become excited about the matter. However, the casualty list on bottles is enormous, taken the country over, somebody has to pay the bill, and if the consumers' demand for stronger bottles becomes insistent enough they will doubtless be made.

Science News-Letter, April 9, 1927

SOCIOLOGY

Politics Cause Prison Chaos

"Politics more than anything else is responsible for our incoherent, ineffective, chaotic prison system in the United States today," declares Austin H. MacCormick of Bowdoin College. "For one reason or another there is not one prison in America today that is doing a well-rounded, thorough-going piece of work in the reclamation of human material. Some of them never will until short-sighted legislatures give them the necessary tools to work with; most of them will not until their wardens and boards of control are selected without regard for politics."

Whether there is a connection between the great increase in burglary crimes and the present methods of writing burglary insurance has been inquired into by Dr. E. B. Crooks, of the University of Delaware. The desire of many insurance companies to write large amounts of business causes them to insure property that is not adequately protected against theft by the owner, he says.

Science News-Letter, April 9, 1927