

conventional, the dot system would still be preferable. The dot is the symbol of wheels and motion. Under this system all wording is eliminated and increase in the number of dots expresses increasing degrees of traffic restriction."

Pedestrian Regulations in Paris

After many years in which no effort was made in Paris to force pedestrians to submit to traffic regulations when crossing streets, rules to that end are now in effect. In a report to the Congress, E. Lorieux and H. Giraud describe these regulations.

One light, instead of the three commonly used in American cities, was recommended by G. Luysen and J. Hansez, Belgian engineers.

A plea for keeping roads and streets as narrow as possible and the declaration that unnecessarily wide roadways are a liability rather than an asset was made by Ignacy Drexler, professor of city management at the Polytechnic School at Lwów, Poland.

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MEDICINE

Possible Paralysis Epidemic Depends on Next Reports

Turning Point is at Hand For a Disease Which is Hard to Recognize Early When It Can Be Treated Best

WHETHER or not the country will be stricken by a widespread epidemic of infantile paralysis will probably be determined within the next few days. The U. S. Public Health Service is anxiously awaiting reports from the various states covering new cases. For the week ending September 27, there were 594 cases. This represents an increase of about 100 cases over the preceding week.

Normally the seasonal increase in cases of this disease would have reached its peak by this time and additional reports should begin to show a decline in the number of cases. If the figures show an increase, public health officials will know that they are facing an outbreak of epidemic proportions. There are more cases of this disease in the country than there have been for the last three years. The last large outbreak was in 1927, when at the peak some 800 cases were reported. In the great epidemic of 1916, however, the cases were reported by the thousands.

Ohio reported 100 cases recently, the largest number for any state. Other high figures were 65 for New York, 65 for California, 43 in Illinois, 32 in Massachusetts, 21 in Maine, 21 in Iowa, 26 in Nebraska, 20 in Wisconsin, and 18 in Missouri.

Mothers Can Suspect

Cure of infantile paralysis, or poliomyelitis as it is called technically, depends on early recognition of the disease, for the methods of treating it are most successful when applied in the first stages. Mothers are always pretty much doctors to their children, and while they cannot hope to make a diagnosis of this disease unaided, they can learn to suspect its presence so as to call for medical aid in time.

Unfortunately, neither the cause nor the method of transmission of the disease are known. Control methods depend on isolating the patient. Prevention also depends on keeping children and young people away from persons suspected or known to be suffering from

the disease. In times of epidemics, it is wise to keep children away from strangers, also.

"The paralysis itself is due to the destruction of the nerve cells in the spinal cord which govern the movement of muscles," Dr. Lloyd W. Aycock of the Harvard Medical School has explained. "When these nerve cells are destroyed, the muscle with which they are connected loses entirely its power to function. It is like a telephone which may be in perfect order itself but which cannot function without a wire leading to it from the telephone exchange."

Definite Symptoms

Consequently treatment for the disease must be begun before the nerve cells have been destroyed, if paralysis is to be avoided. Once it has occurred, it is too late to cure it although patient treatment and care and exercise can do much for the affected muscles. Skillful treatment, if paralysis has occurred, is of great importance, because in growing children the pull of unparalyzed muscles against those which are paralyzed tends to produce serious deformity.

The paralysis is practically always preceded by certain definite symptoms. It is during this preparalytic stage before the nerves have been destroyed, that there is a chance of cure. Serum from the blood of persons who have passed through an attack of the disease is the one remedy at present available for treating the disease in the paralytic stage. Doctors speak of this as convalescent serum.

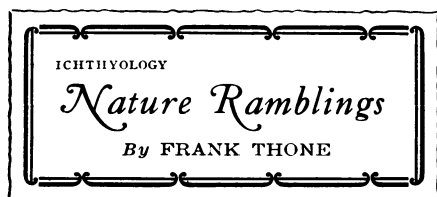
The onset of poliomyelitis is usually abrupt with fever, headache and stomach and intestinal upset. The child is drowsy and wants to be let alone. Usually he seems sicker and more prostrated than would be expected with the degree of fever, which is generally not over 102 degrees Fahrenheit. An anxious expression of the face, tremors and twitchings of the muscles and a sort of uncertainty in the movement of the arms and legs are characteristic of the early stages of the disease.

The most suggestive sign is stiffness of the spinal column and neck. The child will hold his head and neck rigidly and often he cannot sit up comfortably without propping himself on his arms.

Every stiff neck is by no means an indication of infantile paralysis, of course. The stiff neck of this disease is a rather special one. But if the mother finds such a symptom, she should at least suspect the disease and have the matter further investigated without delay.

The paralysis may set in anywhere from one to three days after the onset of the disease. The extent of it varies. When death occurs, it is from paralysis of the muscles used in breathing and not from the severity of the fever.

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A Sarcophagus of Pearl

THERE is in the American Museum of Natural History in New York a most curious pearl-shell specimen. Embedded under the nacre, or pearl substance, is the clearly outlined body of a tiny fish, the only fish known that has so costly a sepulcher. It is not rare for other objects to be so imperaled. Every pearl starts with an irritation to the oyster—a grain of sand, a tiny parasitic animal, or something of that kind. Japanese pearl culturalists start pearls by inserting tiny beads between the lips of the pearl mussel's shell.

The story of the pearl-ensepulchered fish may be a drama of the oyster's conflict with a parasitic robber, or it may be a tragedy of the death of a comrade. Many small fish of the goby family love to lurk about in the shelter provided by larger animals instead of in natural rock cavities. "Messmates," some of them are called; others are known as "commensals." But commen-

salism may pass over, by insensible gradations, into sheer parasitism; and at least a few cases are known of small fish parasitizing large molluscs.

So the oyster that buried a fish in pearl was not necessarily giving mournful sepulture to a departed house-mate; it may have found the house-mate unendurable, killed him, and then sealed him over to get the carcass out of the way.

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Prof. Babcock

(Continued from Page 231)

That feature satisfactorily settled, he sought for some way of getting the drops to the top to be measured, faster than they would float there naturally. He bethought him of our old friend centrifugal force. That is the natural force that keeps the water in a kid's play-bucket when he whirls it round his head on the end of a string—we've all done that trick.

When you whirl a mixture of things in a centrifugal machine the heaviest parts of the mixture go to the outside and the lightest come to the inside. The

faster you whirl the quicker this sorting is accomplished.

The watery-solution part of milk is heavier than butterfat. That is why cream rises to the top. Why not centrifuge the acidified milk samples, and thus make the butterfat drops get a move on?

That is what Professor Babcock did. Then he added the highly practical detail of so regulating the size and shape of the bottles he put into the machine to be whirled that the percentage of butterfat could be read off directly by the marks scored on their long necks.

Thus was the Babcock test given to the world forty years ago, and thus it remains to this day, without the change of a single essential feature. There are dozens of manufacturers of testers all over the world, making machines all the way from modest two-bottle affairs whirled by hand up to big ones holding a couple of dozen bottles, warmed by steam and driven by electric motors. But basically they are all alike. There is probably no modern invention that has so radically reformed a great industry with so little change in itself over more than half a lifetime.

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Astronomical Telescopes



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