

the phosphorus with the heat of an electric furnace.

Sand, rock containing calcium phosphorus, and coke are fed into the electric furnace. In the high temperature of the carbon arc (6,620 degrees Fahrenheit) the three raw products react to create carbon monoxide and elemental phosphorus in the form of a vapor. Because the phosphorus readily and dangerously combines with air, the whole industrial operation must be carried out under reduced pressure or else in a vapor of hydrogen or nitrogen. Purification of the phosphorus vapor condensed under water can be accomplished by melting the element and stirring it. Or certain oxidizing agents like potash can be used to remove impurities.

With the air still excluded, the purified phosphorus can be sealed in steel drums or even tank cars and shipped.

Science News Letter, December 18, 1937

From Page 390

just necessary evils" if they admitted that, with the full cooperation of the patient, pyorrhea and loss of teeth is not necessary and tooth decay can be kept to a minimum.

Dr. Loughry stressed the importance of replacing lost teeth. Sometimes it is necessary to extract some remaining teeth in order to secure a normal bite. The teeth, he explained, work in relation to each other. If even one is missing the whole chewing system is thrown off balance. All the teeth should be used evenly in order to exercise the gums and thus stimulate the supply of blood to gums and teeth. When there is a good blood supply, the teeth and gums are more resistant to decay, infection and other injurious agents.

Jawbone Disease Masquerades

Many cases of pain that appears due to sinus or ear trouble may be due to disease of the lower jawbone, Dr. James B. Costen of Washington University School of Medicine at St. Louis explained.

Among the symptoms traced to this jaw condition are burning tongue, dizziness, deafness, stuffy sensation within the ear, buzzing and grating noises, dull pain within the ears and sinus-like pain. Gnashing of the teeth or partial lockjaw is a serious handicap to successful treatment, and if measurements for artificial teeth are made while this symptom is present, there is apt to be a relapse of the original condition.

Science News Letter, December 18, 1937

MEDICINE

Unethical Not to Patent Medical Discoveries

"IT IS unethical not to patent medical inventions," Arthur G. Connolly, patent attorney of Wilmington, Del., declares in the leading article in the scientific journal, *Science*. (Oct. 29)

The reasons for this conclusion, which Mr. Connolly himself points out may startle many persons, are the following:

1. Even if a physician refrains from patenting a medical invention and merely reports it in a medical journal, he does not necessarily prevent others from patenting it.

2. If the invention is patented by others, it may be developed in a way that will harm the public.

3. If the invention is not patented, there can be very little control over the quality of the product or of the price at which it is sold.

The physician who wishes his inven-

tion to be of greatest service to the public will achieve that end best, Mr. Connolly believes, by patenting his invention and then developing the patent for the public benefit.

Mr. Connolly suggests that it would be helpful for the medical profession to establish a central committee which would protect by patents the inventions of the profession. This same committee could develop the patents so as to safeguard the interests of both public and physicians.

This suggestion is somewhat similar to the proposal recently made by Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, that that medical association might organize a non-profit holding corporation to administer patents in the medical and health fields.

Science News Letter, December 18, 1937

PUBLIC HEALTH

Climate May Play Part In Infantile Paralysis Immunity

THE VIRUS of infantile paralysis is widely scattered throughout the world, existing even in places where epidemics of the disease rarely occur, Drs. N. Paul Hudson and E. H. Lennette of Ohio State University and the University of Chicago reported to the American Society of Tropical Medicine.

Climate, it appears from their studies, may play a part in bringing about a natural immunity or resistance to the disease.

The two bacteriologists examined the blood of small groups of persons living in such widely separated places as Nashville, Tenn.; Liberia; Peiping, China; the Philippine Islands; inland Brazil; and Thursday Island, Australia. Most of these persons, at least four-fifths, had in their blood substances which could neutralize the virus of infantile paralysis. Presence of such neutralizing substances in the blood usually means that the person has previously had the disease or at least has gotten some of the virus into his system and has developed im-

munity or resistance to the disease. Consequently it appears that the virus of the disease is pretty widely scattered around the world.

Epidemics of infantile paralysis are uncommon in the regions in which Drs. Hudson and Lennette made their blood studies, although occasional sporadic cases occur, or the disease may be endemic, a few cases always occurring but with no epidemics.

Since most of these places are in the tropical or subtemperate zone, the two bacteriologists suggest that climate affects the relation between the virus and man. Man in these climates apparently can play host to the virus, which is a parasite, so that it does not die off, and at the same time is able to build up an immunity to it so that he rarely gets sick with infantile paralysis.

Science News Letter, December 18, 1937

The wild rooster, jungle forefather of domestic fowls, cannot crow so loudly as the barnyard cock.