

wonderful, complicated life you can see in a drop of water. Beads go for drops and bubbles, rods and tubing for strands of protoplasm, bristles and stalks. His work is so beautiful it leaves you gasping with incredulity.

Another device that has been tried with considerable success in both this country and Germany is the turning of small animals, like insects, lizards and small snakes, into models in wax by the basically simple process of slowly impregnating them with hot paraffin. While they are still warm they are bent and posed into the exact positions desired, and then the wax is permitted to

chill and stiffen. After this, the surplus wax is gently scraped and brushed away. The animals are left with their natural colors and high glitter, which they would quickly lose if they were pickled in the traditional jars of alcohol or formalin solution. If they are not exposed to unreasonably high temperatures they will keep forever; paradoxical preparations, wax models, yet the real thing.

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#### MUNITIONS MAKERS

*Preparing ammunition for the welfare of medical science against disease, two laboratory workers dissect the spinal cord of a Rhesus monkey from which infantile paralysis vaccine is prepared. The operation is performed after the animal has been killed painlessly and must be carried out under sterile conditions.*

#### PUBLIC HEALTH

## Federal Survey of Chronic Illness to Start Oct. 15

**F**EDERAL study of chronic illness throughout the country is getting under way, and the house-to-house canvass in 19 states to collect information is scheduled to start Oct. 15.

The study will be directed by George St. J. Perrott, statistician of the U. S. Public Health Service. In his office workers are already busy preparing and revising charts, tables and forms for collecting data. However, the study, for which \$3,450,000 was appropriated, is really a WPA project and 90 per cent. of the personnel will be taken from the work relief rolls of the various states.

In between looking at charts and giving suggestions to his assistants, Mr. Perrott explained the reason for this gigantic health inventory.

The front is changing in man's battle against disease. Part of this is due to the advances in science. Powerful weapons are at hand with which to hold in check if not actually to demolish such old foes as yellow fever, smallpox, diphtheria and the deficiency diseases like scurvy, rickets and pernicious anemia.

Part of the change in front results from the appearance and spread of relatively new diseases such as epidemic encephalitis, infantile paralysis, influenza and dental fluorosis.

Another reason for the change in front in the disease fight, and one likely to be of increased importance in the future, is the change in age of the population.

The American people are growing older. There are more middle-aged and older persons in the country and fewer children and young adults. This means

that as a whole the population is outgrowing the childhood diseases and other ailments of an acute nature and becoming more prone to the chronic diseases which appear in middle life. Cancer, heart disease, rheumatism and disabilities resulting from industrial accidents and disease are becoming more important as health problems.

Far-sighted public health officials are alive to this changing front in disease warfare, and already are beginning preparations for the fight on these old foes whose importance is increasing year by year.

The first step, getting accurate knowledge of the enemy's strength and position, is now being taken in the WPA project directed by the U. S. Public Health Service. A gigantic health inventory of the country is to be made. This will tell how many people in America suffer from chronic illness or physical disability; the geographic distribution of such illness; how much time is lost from work as a result of these conditions; and how these illnesses and disabilities affect the capacity of the patient and his family to remain self-supporting.

Some of the information will be obtained from records of hospitals and sick benefit associations. The rest will come from the house-to-house canvasses of 750,000 families selected to be representative of the general population of various income levels. Besides chronic illness, data will be collected on physical disability, such as blindness, deafness and loss of limbs or other crippling.

The U. S. Public Health Service has

already been making an intensive study of the importance and effect of chronic ailments on the capacity of the patient and family to remain self-supporting. The new health inventory will be correlated with this study so as to obtain further data on this phase of the chronic illness problem.

From the knowledge thus acquired the federal health officials hope to attain a strategic position for a successful fight against disease at the new front.

The states selected for the inventory are Washington, Oregon, California, Utah, Minnesota, Missouri, Illinois, Michigan, Ohio, Pennsylvania, Maryland, Virginia, New York, New Jersey, Massachusetts, Georgia, Alabama, Louisiana and Texas.

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#### PLANT PATHOLOGY

### Dutch Elm Disease Found In Indiana and Virginia

**D**UTCH elm disease is still a potential menace outside the zone around New York City where the major eradication efforts have to be concentrated because of the gravity of the infestation there. Two isolated outbreaks, one of nine infected trees in Indianapolis, Ind., the other of two trees in Norfolk, Va., have been reported to the U. S. Department of Agriculture. These trees have been destroyed, and scouts are hunting in their