

remote points and these displacements may be due to tension, compression or torsion.

By attaching a small mass to the external detecting arm of the tube it can be converted into an accelerometer. By the use of elastic bellows fluid pressures can be measured. By using large calibrated proving rings, its range of meas-

urement can be enlarged indefinitely and it has proved useful as an accessory to limit and tolerance gauges.

Because it is able to follow vibrations up to 200 cycles a second it can be attached to an oscillograph and thus produce a visual pattern comparable to the motions of the tiny detecting rod.

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POPULATION

Biggest Migration in World Is Chinese Trek to West

40,000,000 People, Including More Than 30 Universities And Their Students, In Mass Escape From Invasion

IT IS impossible to realize, for those who have not seen, but China's vast wave of refugees moving West now totals 40,000,000.

Estimating this migration—which is the biggest transplanting of human beings in world history—at 40,000,000 is conservative. So declares Dr. David C. Graham, curator of the West China Union University Museum of Archaeology, who has returned to America from the part of China which is suddenly and dramatically invaded by farmers, merchants, teachers, millions of all classes fleeing from areas of Japanese invasion.

"A year ago," said Dr. Graham, "West China had received 30,000,000. Probably another 10,000,000 have come this year."

Despite lack of funds and other handicaps, the Chinese are amazingly resourceful at organizing their new boom area, Dr. Graham has observed. More than 30 universities driven out of East China are established in the West. Farmers from East China find themselves in the bread basket of their great country. Rain-fall is heavy enough to make droughts rare. And farmers can plow and sow with less fear of flood, too, since when the Yangtze overflows in this hilly region, it does far less damage than rivers in the flat East. Many Chinese business men have come West bringing their factory hands and machinery to make a new start.

"The intelligentsia of China are thronging West with the other pioneers," says Dr. Graham. "Leaders who got their education in Columbia University and other American schools are establishing up-to-date schooling for the children. China is far-sightedly conserving

her skilled people. University graduates who volunteer to fight have been told that their duty is to teach soil conservation or whatever other special knowledge they have to give."

China's 400,000,000 people are determined to resist Japanese despotism, and given a ghost of a chance they will become a democratic nation, Dr. Graham is convinced. A potential democracy of so many millions in the Far East is a factor which the Western World might well consider seriously, he points out. China, if thrown back on Soviet Russia too long for aid and supplies, may drift toward communism, but the picture of democratic government is far more attractive to the Chinese than is that of communistic rule.

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MEDICINE

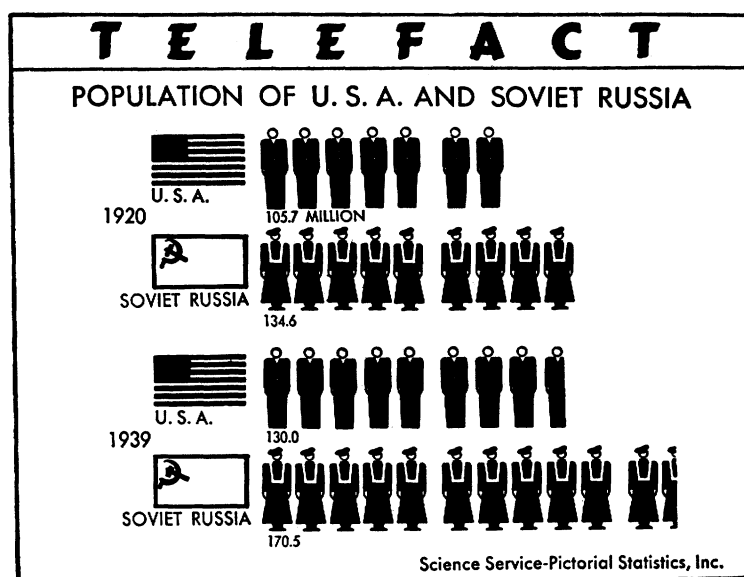
Pneumonia Control Speeded By New Diagnostic Method

LATEST aid in the fight to save pneumonia-threatened lives, especially among children, is a new, speedy diagnostic technic which can shorten to six hours or less the time before starting effective treatment. Details of the new technic are reported by Dr. Franklin D. Poole and Miss Mildred D. Fousek, of the New Haven, Conn., Orphan Asylum and Yale University School of Medicine. (*Journal, American Medical Association*, Nov. 18)

Rapid typing of pneumonia germs found in the patient's sputum, in order to determine which type of anti-pneumonia serum should be used in treatment, has already been accomplished, but often in children and sometimes in adults delay still occurs because of difficulty in obtaining sputum for the test. The New Haven scientists have gotten around this difficulty by applying the usual speedy typing technic to material obtained by swabbing the patient's nose.

The method is valuable, it is pointed out, even though many pneumonia patients are now treated with the chemical, sulfapyridine, instead of with anti-pneumonia serum, because it is desirable for the doctor to know whether the pneumonia is caused by a pneumonia germ or by the streptococcus.

Small doses of sulfapyridine given for a short time in treatment of pneumonia in children are recommended by Drs. Charles Hendee Smith and Rosa Lee Nemir, of New York, in a report,



appearing in the same issue of the *Journal*, of their results with sulfapyridine treatment in 93 cases of pneumonia in children.

The value of sulfapyridine in saving lives, especially from Type III pneumonia for which serum treatment does not have as good a life-saving record as it does in other types, was stressed in another report to the A.M.A. Journal by Drs. Norman Plummer and Herbert K. Ensworth, of New York. Among 270 sulfapyridine-treated patients at New York and Bellevue Hospitals there were

only 34 deaths, they report. Of these, 11 died within 24 hours of the beginning of treatment, which reduces the death-rate in this group to 8.5%. Serum treatment was used in addition to sulfapyridine in 102 of the cases. In serum-treated pneumonia cases a death-rate of about 18% to 20% has previously been reported from Bellevue Hospital. Besides reducing the death-rate, sulfapyridine shortens the period of fever and sterilizes the blood stream, Drs. Plummer and Ensworth reported.

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in less interesting technical matter, Dr. Vernon P. Scheidt, of the Waverly Press, has found.

Rest periods help the accuracy of proof-readers, he told the meeting. Both speed and accuracy drop after three hours of reading and even with rest periods efficiency goes down when the reading time extends beyond six hours.

To insure greatest accuracy in proof-reading, a copy-holder should read aloud to the proof-reader, he found. Looking back and forth from copy to proof is least efficient.

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PSYCHOLOGY

Girls Like Stenography Men Want To Be Flyers

At Meeting in Washington, the Practical Applications Of Psychology Are Discussed; Aid Offered to Government

FAVORITE occupation among both men and boys is flying, a survey revealed to Dr. Glen U. Cleeton of the Carnegie Institute of Technology, who reported his findings to the American Association for Applied Psychology in Washington.

Girls want most to be secretaries, typists or stenographers.

Very popular also among men and college boys in this scientific age are the jobs of inventor, chemist, scientific research worker, and—in contrast—athletic director. Younger boys want to be carpenters or machinists.

Most detested among all the jobs for men is that of the undertaker, but men dislike this job less than do boys. Unpopular also were the jobs of clergyman, music teacher and life insurance salesman.

Girls dread most the jobs of laundress, cleaner, factory worker, politician and baker.

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Practical Tests Urged

PRACTICAL tests of ability to recognize forms and spatial relations and speed in mechanical assembly were urged in place of the "Army Alpha," World War intelligence test, for the selection of Uncle Sam's new recruits for aviation mechanics.

These tests were found to be satisfactory for picking the boys who would make good on their training course, Dr.

Willard Harrell, of the University of Illinois, reported from tests of more than 600 students of the United States Army Air Corps Technical School.

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Stand Ready to Aid

PSYCHOLOGISTS stand ready and willing to help formulate a program for the best use of man-power in our national defense. Official notice of the intention of these experts on the human mind to enlist the immediate aid of their science in expanding America's defense forces was served by Prof. Donald G. Paterson, of the University of Minnesota, in his address as president.

Psychologists are available, he indicated, who are professionally trained to make applications of their science in the practical service of mankind in industry and in the nation's service. Psychologists who were mobilized in 1918 to aid in the World War by making practical use of their scientific knowledge, went back to their laboratories with a new appreciation of applied psychology as distinguished from the "pure science" taught earlier. Now many of their students are ready to contribute in a similar way.

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Miss Errors in Novel

PROOF-READERS miss errors more often in proof on a good novel than

Need Understanding

A NEW deal for the cured tuberculosis patient so that he has a fair chance to return to normal life was advocated by Dr. Morton A. Seidenfeld, of the National Jewish Hospital at Denver, Colo.

The "Magic Mountain" personality of the tuberculous, described by the novelist Thomas Mann as symbolic of their uncertainty, mental unrest and feeling of social insecurity, is due, Dr. Seidenfeld charged, to the failure of the public to understand the tuberculous.

Fear that the patient experiences about the attitude of others makes him depressed and nervous, gloomy and unfriendly and ashamed of his illness.

The public should learn that the patient who has undergone proper medical treatment and been taught how to take care of himself is really a public health asset, Dr. Seidenfeld declared.

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Mistake Trade Names

IF THE public calls all cameras "Kodaks" or all phonographs "Victrolas," they may be giving a lot of free advertising to the manufacturers, but they are giving them some worries. A great many companies try to avoid this misuse of trade names for generic names of products because they fear that the consumer will be led by it to accept imitations, Dr. John G. Jenkins, of the University of Maryland, told the meeting.

As a matter of fact, however, Kodak is generally recognized as a trade name, Dr. Jenkins found through tests on his students. But Mimeograph was mistaken for a name for all duplicating machines by two-thirds of those tested. Most people similarly mistake Dictaphone and Knee Action.

Mixed in Dr. Jenkins' test with the trade names were such truly generic