Blowing

"I HAVEN'T heart trouble," gasped P. V. Wells as he finished blowing into a tube from a little wooden box on a table before members of the American Physical Society meeting.

"If I did I would have become exhausted and stopped blowing long before 50 seconds had passed," he explained.

The flarimeter, a new instrument which will enable people to tell whether they have heart trouble far in advance of serious developments, was being demonstrated. It is now in experimental use by insurance companies and promises greatly to reduce the risks taken by these organizations.

"Shortness of breath, the leading symptom of an impaired heart muscle, is measured," Mr. Wells explained.

The person being tested forces air out of his lungs at a slight, constant pressure, and those who suffer from shortness of breath become exhausted much sooner than normal persons.

Physiology-Physics
Science News-Letter, May 10, 1930

Caused Indian Wars

EARLY Indian wars which menaced the lives of the colonists were due at least in part to failure of the Colonials to understand how the Indians regarded ownership of land, Dr. M. W. Stirling, chief of the Bureau of American Ethnology of the Smithsonian Institution, believes.

"The Indians," he stated in explaining present-day researches among American Indians to the House Appropriations Committee, "never had any idea of individual ownership of land, or even of tribal ownership of land. They usually recognized boundaries within which a certain tribe had certain rights; but no individual in a tribe, no chief or anyone else, had the right to dispose of that property, according to their customs.

"When the whites came in to get hold of property they overlooked this fact. They made what purported to be documentary deals with head men of various Indian tribes, thereafter taking possession of the land. The Indians never recognized any change of ownership there, and naturally there was trouble."

Present day researches among the Indians, in an effort to reconstruct history and record changes taking place in Indian customs after contact with civilization, Dr. Stirling believes, will shed psychological light on many problems, and should enable legislators who deal with Indians today to dispose of problems more intelligently.

The Indians are almost pathetic in their eagerness to cooperate, Dr. Stirling stated, and it is touching to see how anxious they are to be understood, particularly some of the older Indians.

"When they discover that the ethnologist working with them actually has an intelligent and sympathetic knowledge of the beliefs that they have been so accustomed to seeing laughed at, or so totally misunderstood, they want to put in more time than the ethnologist can usually find at his disposal for this work," Dr. Stirling said.

Ethnology
Science News-Letter, May 10, 1930

Asteroid

THE discovery of a new minor planet, or asteroid, belonging to the famous Trojan group, is reported by the Astronomisches Recheninstitut at Berlin.

Unlike Planet X, recently located far beyond Neptune by Lowell Observatory, the new minor planet and most of the other more than a thousand asteroids have orbits that lie between those of Mars and Jupiter. They are only a few miles in diameter.

The new asteroid was found by K. Reinmuth, assistant at the Königstuhl Observatory, and its orbit was computed by Dr. G. Stracke of the Astronomisches Recheninstitut. It proved to be the seventh Trojan planet, another of a group of asteroids of great interest to astronomers because they keep always at approximately the same distance from Jupiter as well as from the sun. Moving at the same rate as Jupiter when viewed from the earth, they represent actual examples of the famous Lagrangian solution of how three bodies act upon each other in space.

The new planet, as yet unnamed, is found to be close to Achilles, Hector, Nestor and Agamemnon, which are preceding Jupiter in their travel around the sun, while Patroclus and Priamus follow the giant planet of the solar system.

Like the rest of the asteroids, the new one is thought by astronomers to be a fragment of a planet that once may have occupied the vacant space between Mars and Jupiter but which was spoiled in the making.

Astronomy
Science News-Letter, May 10, 1930

Flickerless Movies

ACCOUNTS of a new method of motion picture projection for which the inventor claims a complete absence of flicker, have just been received at the U. S. Department of Commerce from Assistant Trade Commissioner Du-Wayne G. Clark, stationed at Johannesburg, South Africa.

According to Mr. Clark, the salient feature of the new projector is a series of lenses arranged in a channel shaped like the letter "D". These move with the film, so that an image of each picture is formed through a separate lens. Two or three lenses are in use simultaneously, and cast their images on a large lens which, in turn, combines them on the screen. The result is that each picture fades imperceptibly into the next, without the alternations of light and darkness typical of the usual projector.

Some years ago C. Francis Jenkins, Washington inventor, developed a means of securing this same effect with a single lens and a special rotating prism. He also developed a camera using a number of lenses which moved with the film, as in the South African projector, but they were arranged around the edge of a disc. This method was used in a high speed camera which was run so rapidly that it was impossible to stop and start the film for each exposure as in ordinary cinematography.

Photography
Science News-Letter, May 10, 1930

IN VARIOUS

Health Insurance

THE development of national health insurance is increasing along three lines, Dr. George F. McCleary, medical officer of the British Ministry of Health, said at the last of this season's De Lamar lectures at the Johns Hopkins School of Hygiene and Public Health.

"The schemes in operation in the various countries differ considerably in regard to the proportion of the population coming within the scope of the scheme, the nature and extent of the benefits given and the relative costs falling on the insured persons, the employers and the State, but three broad lines of tendency may be observed," Dr. McCleary said.

"The number of occupations made insurable tends to increase; the benefits in kind are relatively more fully developed and extended than benefits in cash; and an increasing effort is expended in preventive work."

Health insurance on a national basis has had most important in-

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fluence on the work of the medical profession in the various countries, Dr. McCleary said. Serious difficulties have been encountered which, however, are believed to be in process of adjustment.

Dr. McCleary outlined the development of mutual insurance against sickness, describing its place among the activities of the Guilds of the Middle Ages and the Friendly Societies in the 18th and 19th centuries. In 1884 sickness insurance on a compulsory basis was introduced into Germany by Bismarck and has since been adopted by most European countries, he said.

Economics

Science News-Letter, May 10, 1930

A Distressed Coyote

COYOTES are usually given credit for being cautious and cunning, but there is one bit of woodcraft which the tribe never seems to learn. They cannot get it through their heads that porcupines are not nice animals to play with. Ranger "Scotty" Bauman, of the National Park Service, is one of the most experienced coyote-killers of these parts, and he declares that 75 per cent. of all the coyotes taken in the park have porcupine quills in them.

"Scotty" recently sent in to park headquarters a report from a friend of his, Mr. Fisher, of the transportation company, of a distressed coyote he had seen. "More quills in his mouth than the average porcupine has on its body," was Mr. Fisher's summary of the animal's plight. He walked right up to the coyote, and could have killed it with a club had he desired, so engrossed was the poor creature in the task of trying to get rid of the troublesome spines.

Zoology

Science News-Letter, May 10, 1930

Immigrant Problem

REALLY intelligent immigration legislation can be based only on a careful scientific study of the races to be dealt with, using the technique of modern anthropology. This is one thesis advanced by Dr. Fay-Cooper Cole, professor of anthropology at the University of Chicago, and chairman of the division of psychology and anthropology of the National Research Council.

"The technique developed in our studies of simpler cultures are now being modified and applied to our alien groups," said Prof. Cole. "So long as we drew our population largely from northern Europe there was little difficulty in adjusting the newcomers to American conditions, but with the influx from southern Europe the situation changed. We were then forced to deal with people whose social, economic and mental backgrounds were very different from our own, and our attempts to incorporate them into our national life were far from successful.

"To remedy this situation Anthropology is carrying on intensive investigations of these people in their home-lands. It is studying the physical types and cultures of the peasants of Sicily, Mexico, and other regions from which we have drawn or are still drawing large numbers of immigrants, in order that we may be able to intelligently direct their adaptation to American life and conditions. The practical application of such studies is beyond question. If you wish to understand the Mexican in Chicago you must first know him in Mexico."

Sociology

Science News-Letter, May 10, 1930

Man's Antiquity

THE great antiquity of man, as man, claimed by Dr. Henry Fairfield Osborn, president of the American Museum of Natural History, is challenged by an equally eminent scientist, Dr. Ales Hrdlicka, anthropologist of the U. S. National Museum at Washington. Dr. Hrdlicka does not believe that human beings existed in Tertiary times, before the beginning of the great Ice Age, but that they appeared on the scene much later, some time during the Quarternary, when the glaciation of Europe and eastern America was in progress.

Dr. Hrdlicka is skeptical of a number of points on which Dr. Osborn and his fellow-supporters of Tertiary man are quite convinced. He doubts, for one thing, whether it is definitely proved that the remains assigned to Tertiary man, especially those at Piltdown, England, are really Tertiary in their geology. The dividing line between the two ages, he said, is always hard to determine, and many geologists and archaeologists hesitate to assign the Piltdown and other remains to a greater antiquity than they must.

The earliest authenticated finds of human bones and tools belong to the middle of the Quarternary, Dr. Hrdlicka said. They represent the culture called Chellean, and the one sure human bone is the famous Heidelberg jaw from Mauer, Germany. But between these and Tertiary time there is a gap of two glacial advances and a major interglacial stage, representing about a third of all Quarternary time.

Anthnopology

Science News-Letter, May 10, 1930

Chromolinoscope

RIBBED photographic film, such as amateur movie makers use when they take movies in color, was suggested as a means of making still photographs in color by Dr. Herbert E. Ives, physicist of the Bell Telephone Laboratories.

Dr. Ives pointed out that this was really a revival of an instrument invented by his father, Frederic E. Ives, called the chromolinoscope, in which a separate screen of tiny ridges separated the light from a lens divided into three parts by three different color filters. This method was applied for amateur color movies by impressing the ridges on the film itself. Dr. Ives also suggested a means of copying such pictures in color, by photographing them with similar ridged film, but with the ridges running at right angles to those in the negative, thus avoiding troublesome "moire" effects.

Photography

Science News-Letter, May 10, 1930

Carsickness

CARSICKNESS, a kind of seasickness which some people suffer from while riding on street cars, does not result from the rider's looking out of the window, as has been popularly believed, Dr. James E. Lebensohn of Northwestern University reported to the American Physiological Society.

The illness is caused by the disturbance of the labyrinth of the ear due to the jarring of the car, Dr. Lebensohn stated. In his experiments subjects in the laboratory were able to follow a moving object which caused their eyes to move back and forth for hours without suffering any nausea. But when the up and down motions and slight jars of a moving car were reproduced in the laboratory, the carsickness resulted.

The same condition was produced when the labyrinth of the ear was stimulated by electricity, so that the fluid in the semicircular canals of the ear was continually disturbed, Dr. Lebensohn said.

Physiology

Science News-Letter, May 10, 1930