

of youth's priceless attributes. But there are enough risks worth taking because the common good will be advanced, without looking for useless ones. A corollary of the old saying, "nothing ventured, nothing gained," is the thought, "nothing should be ventured where nothing can be gained."

The future of aviation depends to a great extent on our winning public acceptance of flying as a safe form of transportation and of sport. Loeb's and Decker's ill-fated attempt certainly does not help us to put this idea across.

We have imposed stringent penalties for taking part in and aiding such pointless flights. We intend to enforce them. But something more than mere administration of the Civil Air Regulations is needed.

So, as chairman of the Civil Aeronautics Authority, I appeal to you for your cooperation. Let's use planes only for the purpose for which they were built. Let's fly safely and sanely. Let's stop this epidemic of transatlantic foolishness before it goes any further.

Science News Letter, August 26, 1939

PHYSICS

Cosmic Ray Experts Sail For Round-World Test Trip

PROF. Robert A. Millikan, California Institute of Technology Nobelist, is leading a party of cosmic ray research explorers on a round-the-world trip which will not end until early in 1940.

On Aug. 16, Prof. Millikan with his assistants, Drs. Victor Neher and W. H. Pickering, sailed for Australia treasuring a cargo of precious cosmic ray meters and small balloons with which they will probe cosmic ray intensities near the top of the atmosphere. Mrs. Millikan accompanies the party.

The itinerary calls for a route to Australia, Tasmania, the East Indies, India, Egypt, and then to Europe.

Measurements will be made at heights up to 15 miles and more. The instruments will record the temperature and pressure at these great heights as well as cosmic radiation. In India, the scientists will depend upon having their apparatus picked up and returned for study after its ascent and fall. Over the ocean and in less populated regions special apparatus will be employed which records the observations and continuously

sends them back by radio to the scientists on the ground.

If these new instruments prove sufficiently accurate it will be unnecessary thereafter to restrict experiments to well populated regions where there is a good chance to recover fallen instruments and study their records. It will then be possible to investigate the cosmic radiation high up in the atmosphere over land or sea, in the deserts or in the Arctic regions where observations are badly needed.

Much of the journey of Prof. Millikan and his group will take them south of the earth's magnetic equator into a region where cosmic rays have been all too little studied. New and important knowledge of these mysterious, piercing radiations is virtually certain to come from the work of the expedition.

Science News Letter, August 26, 1939

A German inventor has devised a way of making shoe soles "incredibly durable" with a renewable coating mixed with sand or other granular material.

PSYCHOLOGY

Survival of Superstition Laid to School Methods

THE question of what educates a person for successful living is of more importance today than ever before because of the critical state of our civilization not only abroad but here in America. It is fundamental in judging whether our schools and colleges are doing a good job, whether our teachers are using the right methods, whether our people are being trained to think for themselves and tackle their daily problems rationally and successfully.

Worrisome are some of the evidences of failure reported by Prof. Otis F. Curtis of Cornell in a recent address at a scientific meeting. He reports that a professor of a scientific subject in a university of high standing let his son die of appendicitis without even consulting a physician; he had become a faith healer. Another professor with a national reputation in the field of economics recently said: "Vaccination and serum treatments are all bunkum." Chain letters, promising good luck if forwarded and bad luck if the chain was broken, were received from two Ph.D.s, whose "superstitious fears made them uneasy and perhaps even afraid to break the chain." There are many other cases of individuals with extensive schooling who fail to use "common sense." The medicine man, the believer in witchcraft and the voodoo priest practice in our midst today, called by more high-sounding names.

Some of the difficulty lies in the method of teaching, in Prof. Curtis' opinion. No schooling can hope to give the answers to all problems that might arise, but there is much more transfer of the right sort than is commonly recognized. Successful teaching will develop one's attitude or method of approach to a problem; that is, approach with an open mind, without prejudice; an attempt to ascertain all possible facts bearing on the matter; a search for opposing evidence; a critical weighing of the evidence; a recognition of what constitutes evidence; a readiness to recognize possible complexities and contradictory evidence; and perhaps that all the evidence is not yet at hand.

No one subject or field has a monopoly on such training in critical method, but, unhappily Prof. Curtis finds that much of the schooling even in colleges and universities is not of such a nature as to give this training.

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