

would hardly please Nazi race "experts".

Prof. Robert H. Lowie of the University of California and Prof. Otto Klineberg of Columbia University, who discuss respectively the achievements of human races and mental testing of racial and national groups, give no comfort to believers in racial superiorities. Their findings, and those of co-workers whom they review, load the scales rather heavily on the side of environmental influences.

Science News Letter, October 11, 1941

PSYCHOLOGY

Army Seeks New Yardstick To Measure Flyers

THE ARMY is searching for a new kind of yardstick. With it they want to measure the dauntless spirit, keen perception and sure-fire judgment that make the fighting flyer a success.

Three new psychological research centers are being established at Army Air Corps fields where intensive work will be done to find rapid, accurate ways of picking men who will make good pilots, good leaders, good observers or good bombardiers.

Taking up the threads of research where pioneers in this field dropped them at the end of the first World War, psychologists will now seek out new devices and tricks of technique fitted to selection and training of men for modern blitzkrieg warfare in the stratosphere and dive-bombing to the earth.

Psychologists will work closely with physiologists and medical officers in this research because it is recognized how closely interrelated are the problems of mind and body.

The Army has picked to head these psychological research centers, under the medical division of the office of the Chief of Air Corps, men who are recognized as leaders in psychology. Among them are: Dr. John C. Flanagan, of the Cooperative Test Service of the American Council on Education, who will direct the project from Washington; Prof. Robert T. Rock, of Fordham University, who will be at Kelly Field, Texas; Prof. Laurance F. Shaffer, of Carnegie Institute of Technology, at Maxwell Field, Ala.; and Prof. Arthur W. Melton, of the University of Missouri, probably at Santa Ana, Calif. A psychological staff will also work at the School of Aviation Medicine, in the medical research laboratory.

Science News Letter, October 11, 1941

Old automobiles are being converted into *farm tractors* in England.

MINERALOGY

New Mineral Discovered With Smallest Crystals

So Small that 1,000 Laid End to End Would Measure Only an Inch, Crystals Have Been Successfully Measured

MINERAL crystals so small that 1000 of them laid end to end would reach only an inch, have been successfully measured by Samuel G. Gordon, mineralogist at the Academy of Natural Sciences of Philadelphia.

These crystals are of a new mineral, just discovered in a mine in Argentina, and flown air mail to the Academy's expert for description and naming. They are the smallest mineral crystals ever measured, the previous smallest being twice as large.

Called sarmientite by Mr. Gordon and Dr. Victorio Angelelli, of the Argentina department of mines and geology, co-author of the paper in which it is described, the new mineral is found in fair-sized nodules of great purity, of a pale yellow-orange color, in iron sulfate deposits of the Santa Elena mine.

This mine, high in the mountains of the department of Barreal, lies between San Juan and Calingasta, at an elevation of around 5,000 feet. It has been worked only a short time, yielding alums for use in water purification.

Already a number of rare minerals have been found there, some so rare that they had previously been found only at the original localities, mostly in Europe. Practically nothing was known about these rarities until they were rediscovered in the Argentine mine, and restudied by Mr. Gordon.

The new mineral was picked out of a mass of rare minerals by members of the department of mines and geology of Argentina. The pale yellow-orange nodules were unlike anything seen before in the mine and excited the interest of Dr. Angelelli, who believed they might be a new mineral. A sample was dispatched at once to the Academy, because of its high rank in the field of micro-mineralogy.

Mr. Gordon studied the nodules under a high power microscope, and could see that they were made up of exceedingly minute prisms, the largest of which were only a thousandth of an inch long. One of the largest, for the smallest were only a twelfth as large, he mounted on

the point of a pin, carefully orienting it under the microscope. It was transferred to a two-circle goniometer, a complicated instrument for determining the angles of minute crystals. Light signals could be seen as the various faces of the crystal were turned and the angles of the faces were measured. He was then able to draw a figure of the crystal and classify it as of the monoclinic system. Chemical analysis disclosed that it was a hydrous iron arsenate-sulfate.


The new mineral was named for Domingo Faustino Sarmiento, a great Argentinian educator and statesman, who was born in 1811 and died in 1888. Sarmiento held the offices of minister

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of public instruction and minister of the interior, and was made minister to the United States. While in his diplomatic post in Washington, he was made president of the Argentine Republic, in 1868. It was through him that American ideals in education were brought to the Argentine. He also founded the Cordoba Academy of Science, an important scientific institution in Argentina.

Science News Letter, October 11, 1941

ENGINEERING

Anti-Aircraft Gun Mount First Built By Industry

See Front Cover

THE FIRST 90 millimeter anti-aircraft gun mount to be built by private industry in the United States has been completed in the shops of the Allis-Chalmers Manufacturing Company. This gun can shoot an explosive shell nearly seven miles up into the air, which is higher than most bombers can fly. Workmen, putting the finishing touches on the gun mount just ten minutes before its presentation to the United States Army, are shown on the front cover of this week's Science News Letter.

Science News Letter, October 11, 1941

An 800,000-word handbook of Federal *Indian Law* has been prepared by the Government.

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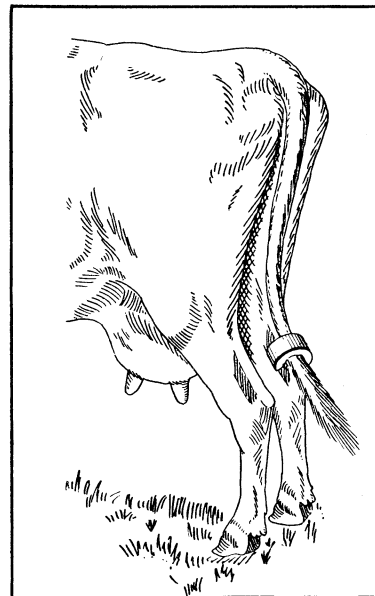
Novel Things for Better Living

The back seat of a motor car is too narrow to stretch out on comfortably, even in the new extra wide models. But diagonally there is room and everything would be fine, if only there were something to rest your feet on. This need is now supplied by an invention recently patented. It is a sort of auxiliary seat on the order of a Morris chair, which rests on the original seat but fits snugly into the corner, and has a long footrest stretching diagonally across the rear compartment of the car.

The home mechanic who, in attempting to do some soldering, has often felt that he needed three hands, one to hold the soldering iron, another to hold the solder, and a third to hold the work—a job for a man and a half, too much for one, not enough for two—will welcome a solder feeding device that has recently been patented. It can be attached to any soldering iron, takes an ordinary spool of solder wire and guides the latter to the tip of the iron. A little push on a lever provides fresh solder as needed.

Air cooled by a spray of cold water is the method used in a simple air-conditioning device on which a patent has recently been granted. But what about the moisture that is thus added to the air? That matter has been taken care of by this device. The air after spraying passes into a rapidly revolving cylinder where the moisture-laden air is thrown outward to the walls of the cylinder and passes out through openings therein. Only the relatively dry air in the middle is drawn off for cooling.

This cow tail holder prevents the cow from swishing the milkmaid or man in the face. However, she can still kick the pail. The device, on which a patent has been granted, consists of a clip of soft resilient material (rubber to



you) in which a metal spring is buried, so that the tail can be clipped to a tendon of the cow's leg. Undoubtedly the milkman and the flies will be in favor of this arrangement, but we have yet to hear from the cow.

If curved windshields are ever applied to automobiles—and this would be very desirable because they would not flash the sunlight into other people's eyes—a difficult little problem would arise in the windshield wiper. However, this has already been solved by a recently patented wiper which is mechanically so arranged that the curvature of the wiper is modified, as it swings to and fro, in such a way as to follow that of the windshield.

Chemical icicles are used on many of Hollywood's movie sets. The icicles are made of cellophane and water glass—the substance used to preserve eggs. After being shaped they are dipped in alcohol, which solidifies them, and then in paraffin. The latter forms a coating which melts under the heat of the spotlights, giving a very realistic effect of icicles slowly melting.

A phonograph needle having a large, rounded sapphire tip has recently been granted a patent. It is said to reduce the needle scratch because it rides on the well-formed top of the record groove, never on the noisy bottom. For this reason, too, the life of the record is prolonged many times. It is especially adapted for use on phonograph-radio combinations, and will appear in the 1942 models of a well-known maker.

If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St. N. W., Washington, D. C., and ask for Gadget Bulletin 74.

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