

## METALLURGY

**Nature Gives Copper Coats To Ancient Silver Coins**

**A**UTHENTIC Greek and Roman coins of Cyprus, seemingly of copper, have been turning up in excavations, whereas on archaeological grounds these coins would have been expected to have been silver.

Archaeologists turned to metallurgists in this dilemma. Dr. Stanley G. Willimott, government analyst at Cyprus, presented the solution to the Institute of Metals, in England. Nature had taken a hand in what seemed to be archaeological faking and had copper-coated silver coins. Dr. Willimott found that the copper coats were put on by the galvanic action due to the chance contact of silver coins with iron, in the presence of water containing copper sulphate as an electrolyte.

Just to prove that this is possible, he demonstrated this chemical action in the laboratory and coated modern silver coins with a tenacious film of copper.

*Science News Letter, September 22, 1934*

## MARINE ENGINEERING

**Cunard Ocean Giant Ready To Take To The Water**

See Front Cover

**S**EPTEMBER 26 marks the day when King George and Queen Mary of England journey to the shipbuilding town of Clydesbank, Scotland, to launch the new Cunard super-liner—the "534." Unofficially the Princess Elizabeth has been suggested as the name for the new giant of the seas but the ultimate name of the ship is carefully shrouded in mystery.

With a length of 1,018 feet and with a 115-foot beam, the "534" is a hundred feet longer and ten feet wider than any ship now afloat. British marine engineers will be disappointed if the "534" does not reach its estimated speed of from 32 to 35 knots an hour. Its gross tonnage is 73,000 tons.

Comparison with vessels now in use discloses the size-superiority of the still-unnamed "534."

Majestic (British)—56,621 registered tons (R.T.); 915 ft. 5 in. length; 100 ft. 1 in. breadth; 58 ft. 2 in. depth.

Berengaria (British)—52,226 R. T.; 883 ft. 6 in. length; 98 ft. 3 in. breadth; 57 ft. 1 in. depth.

Bremen (German)—51,656 R. T.;

898 ft. 7 in. length; 101 ft. 9 in. breadth; 48 ft. 2 in. depth.

Rex (Italian)—51,062 R. T.; 879 ft. 9 in. length; 97 ft. breadth; 30 ft. 7 in. depth.

Leviathan (U. S.)—48,943 R. T.; 907 ft. 6 in. length; 100 ft. 3 in. breadth; 58 ft. 2 in. depth.

*Science News Letter, September 22, 1934*

## PSYCHOLOGY

**Chimpanzee Uses System In Solving Problems**

**I**N TRYING to solve a problem, such as discovering in which of a group of boxes lies the coveted banana, the chimpanzee goes to work in a systematic manner. He doesn't make his attempts in any random, haphazard manner. This evidence of the ape's cleverness has been discovered by Kenneth W. Spence, of Yale University's Experiment Station at Orange Park, Fla.

The attempts of the chimpanzee appear to follow a definite pattern, Mr. Spence declared. For example, if the animal first chooses the first box at the left end of the row, but finds it empty, it will next try the second from the left, and then the third from the left, and so on until the correct box is found. Marked individual differences were found in the speed with which they shift from one incorrect choice to another, and in the tendency to repeat an incorrect choice.

*Science News Letter, September 22, 1934*

## METEOROLOGY

**Weather For Autoists At Filling Stations**

**S**PECIAL radio receivers at filling stations and other points along motor routes to supply autoists with weather information is a suggestion by the Bureau of Air Commerce.

Every hour 68 airways broadcast stations in the United States send out the latest weather news for the benefit of fliers. This information, often valuable for motorists, could be made available by the installation of 200 to 400 kilocycle receivers at places motorists frequent on a cross-country trip.

The plan, it is believed, would be particularly valuable in rugged and mountainous regions where a fog may mean delay, a heavy rain a washout and snow an impassable section of road.

*Science News Letter, September 22, 1934*

**IN SCIEN**

## MEDICINE

**Head Colds Not Benefitted By Removal of the Tonsils**

**C**HILDREN subject to tonsillitis, enlarged glands of the neck and ear trouble are most benefitted by removal of the tonsils, Dr. Albert D. Kaiser of the University of Rochester School of Medicine found from a study of a large group of children for a period of ten years, which he reported to the American Academy of Ophthalmology and Otolaryngology. Heads colds and infections of the chest, on the other hand, were not benefitted by removal of the tonsils. Tonsils may be large without causing any trouble and mere size is no reason for removing them.

*Science News Letter, September 22, 1934*

## ANIMAL PSYCHOLOGY

**Masterful Sex Not Always Male in Monkey Societies**

**A**MONG monkeys, it is not always the male who can be described as the masterful or dominant one of a pair, A. H. Maslow, of the University of Wisconsin psychological laboratories, told members of the American Psychological Association.

In an experiment designed to show the relationships between dominance and other social behavior in primates, 15 pairs of previously unacquainted monkeys were tested for 30 periods of 20 minutes each. A limited amount of food was given to each pair to quarrel over.

The question of which would get the better of it was apparently settled by the personality of the animals rather than by the sex. The dominant animal gets more food, plays the masculine role in sex activity regardless of gender, initiates bullying, fighting and play, and is more active, Mr. Maslow reported. The submissive animal gets little or no food, plays the feminine role regardless of gender, and responds to the dominant animal's aggression by passivity, cringing, or flight.

*Science News Letter, September 22, 1934*

# CE FIELDS

## MEDICINE

### Sleeping Sickness Injures Intelligence

**S**LEEPING sickness has an adverse after-effect on intelligence. This is indicated by a study of 83 children who have had the disease, reported by Dr. Andrew W. Brown of the Institute for Juvenile Research, Chicago.

These children were each given at least two ratings on the standard Stanford-Binet test, and some were given three, four, or even five such ratings at intervals of from one to ten years.

The so-called Parkinsonian cases, which are characterized by a remarkable absence of facial expression and rigidity of the muscles, were studied separately. A definite downward trend in intelligence quotient was observed in most of the Parkinsonian cases, and a slight tendency toward deterioration was found in the non-Parkinsonian cases. A marked difference was found between the motor ability of normal children and the victims of sleeping sickness.

*Science News Letter, September 22, 1934*

## PSYCHOLOGY

### Lack of Meat In Diet May Cause Stammering

**I**MPROPER diet in infancy and childhood may be a predisposing factor in causing stammering, Dr. Knight Dunlap, of the Department of Psychology, The Johns Hopkins University, has concluded from a study of the childhood history of a number of stammerers who have come to him for treatment. Lack of sufficient meat is probably the predisposing cause of this speech defect in a great many cases, Dr. Dunlap says in a report of his findings, published in *Science*.

Those who have the opportunity to work with stammering children are urged to try putting them on a diet including plenty of meat.

"From the age of two years, there is no reason why children should not have meat at least twice a day," Dr. Dunlap said. "In many cases where the diet has

previously been badly managed, the problem may be to induce the child to eat a sufficient quantity. Variety of meats and of preparation, with good psychological technique, offer the solution to this problem. Overcooked meats should probably be avoided."

Whether a full meat diet would aid the adult stammerer is conjectural, Dr. Dunlap said.

"The situation of the adult stammerer is of course quite different from that of the stammering child or adolescent," he said. "That which may be a predisposing cause in infancy may have other bearings in adult life. Since a surprisingly large number of adult stammerers are relative vegetarians, however, it would seem possible that meat diet would be advantageous to many of these cases."

*Science News Letter, September 22, 1934*

## ASTRONOMY

### Alcohol, Confusing to Man, Helps Keep Stars in Order

**A**LCOHOL, which sometimes makes men uncertain of their own location, is used by astronomers to gain greater certainty regarding the location of the stars. How this is done was told before the meeting of the American Astronomical Society at Connecticut College, by Dr. Piet van de Kamp, of the McCormick Observatory, University of Virginia, and Dr. A. N. Vyssotsky.

Positions of stars are determined by micrometric measurements of their images on photographic plates. Sometimes the gelatin emulsion on such a plate will warp or stretch or become otherwise distorted when it is wet during the developing process. Star images thus carried only a fraction of a hair's breadth out of their true position may give rise to most impressive inaccuracies, when the little error on the plate is multiplied by the tremendous numbers that are astronomers' playthings.

The alcohol insurance of accuracy used by the two McCormick Observatory astronomers is quite simple in principle. Before a plate is used, it is first soaked in water, then in alcohol, and finally carefully dried. If there is any tendency toward distortion on the part of the emulsion, it gets it all out of its system before it is exposed in the telescopic camera. The star images thereafter "stay put," and the astronomers can depend on the accuracy of their measurements.

*Science News Letter, September 22, 1934*

## PHYSICS

### World's Hottest Spot Is in Carbon Arc Light

**T**HE "hot spot" of the world, so far as science can create it, is the carbon electric arc. Such arc lights, used in powerful searchlights, have a temperature of 3,810 degrees above absolute zero. This temperature is exceeded only in distant stars and in the center of the earth.

Scientists have just determined definitely the temperature of carbon arcs, after intensive research which began in 1801 with the work of Sir Humphrey Davy. To have fixed the temperature as 3,810 degrees is an important landmark for science.

In a report to the American Chemical Society in Cleveland, Ohio, Dr. V. C. Hamister, N. K. Chaney and S. W. Glass of the National Carbon Company indicated that the new-found temperature will be as important to the science of high temperatures as is the melting point of ice or the boiling point of water to investigators in ordinary temperature work.

*Science News Letter, September 22, 1934*

## PSYCHOLOGY

### Physicians Rated Higher Than U. S. Senators

**T**HE PROFESSION of the physician leads in prestige, no matter what the occupation of the person making the judgment, Dr. George W. Hartmann, of Pennsylvania State College, told members of the American Psychological Association at its recent New York meeting.

The status assigned to any particular career is just about the same when rated by persons engaged in it and when rated by disinterested outsiders, Dr. Hartmann found in personal interviews with 450 persons of various walks of life. The professions stand near the top in prestige, and the "labor" group near the bottom. Here is a sample of how some occupations are rated, from highest to lowest:

Physician first, then United States Senator, professor, lawyer, civil engineer, dentist, clergyman, high-school teacher, factory manager, merchant, salesman, nurse, actor, mail carrier, garage mechanic, tailor, bricklayer, baker, policeman, plumber, miner, barber, cook, and fisherman.

*Science News Letter, September 22, 1934*