AVIATION

U. S. Loses Supremacy In World's Aviation Records

AVIATION records mean dollars in the value of airplane exports. It is more than coincidence that during the last two years, when the United States led the world in the number of aviation records held, aeronautical exports reached an all-time high, says Charles F. Horner, president of the National Aeronautical Association.

The sad part comes because now Italy has replaced America as leading world record holder. Last year the aviation record situation looked like this:

United States	54	records
France	37	"
Italy	26	"
Germany	8	"
Great Britain	1	"
Russia	1	"

Now, however, the aviation "batting averages" of the world have shown significant changes, and look like this:

Italy	45	records
United States	43	"
France	35	"
Russia	15	"
Germany	14	"
Great Britain	4	"

Fully as dramatic as Italy's climb from third to first place in the record ratings is the rise of Russia from one record to 15 records within a single year, states Mr. Horner's summary in the current issue of National Aeronautics.

A feature of the records race has been the battle between Italy and Great Britain for the world's altitude mark. Since last summer first Italy and then Great Britain have alternated in pushing the mark higher, each time by approximately 2,000 feet. It is now held by Great Britain at 53,937 feet.

Science News Letter, September 4, 1937

MEDICINE

18th Century Convicts Served As Guinea Pigs

WHEN a convict condemned to death or life imprisonment agrees to serve as human guinea pig in return for a remand of his sentence, it's news. But it is not really a new idea. Neither is that other apparently modern method of scientific investigation, the use of identical twins for scientific study.

Digging into the 18th century records of the reign of King Gustav III of Sweden, Dr. B. E. Dahlgren, chief curator of botany of the Field Museum in Chicago, found that King Gustav used a pair of convict twins as guinea pigs to settle, in quite 20th century scientific fashion, a controversy of the day.

The argument was over the respective merits or possible injurious effects of tea and coffee. (That row over whether tea and coffee are harmful is an old one, too.) The two beverages had but recently been introduced into the Scandinavian countries and the partisans and promoters of each vied for the market by claiming the other was harmful and dangerous to health.

King Gustav III became tired of the controversy and when two identical twin brothers were convicted of murder, and condemned to death, the king saw a way of settling the problem once for all. He commuted the sentences to life imprisonment with the condition that one twin must be given a large daily dose of tea and the other an equivalent amount of coffee. In this way he hoped to get what might have been called pretty good scientific evidence as to which beverage was more harmful.

As it turned out, the brothers lived on and on, till public interest died away. Finally, at the age of 83, one brother —the tea drinker—died. The question was thus settled, presumably to the satisfaction of the Swedish people who now lead the world in per capita consumption of coffee.

Science News Letter, September 4, 1937

PSYCHOLOGY

New Professional Society For Practising Psychologists

A NEW scientific society was born when psychologists who gathered at the University of Minnesota for the regular annual meeting of the American Psychological Association organized the American Association of Applied and Professional Psychology.

The new organization will be a professional organization, serving practicing psychologists somewhat as the American Medical Association serves medical doctors.

In scientific sessions the members discussed problems in clinical psychology, including treatment of mental defectives and those with speech and nervous disorders; consulting psychology; educational, industrial and business psychology.

Practical problems that also received attention at sessions included the technique of giving mental tests, and source and influence of attitudes toward social questions; development of tests for post-depression occupations; and testing of workers and automobile drivers for accident proneness.

Science News Letter, September 4, 1937

IN SCIENC

SEISMOLOGY

Cables Beat Earth Waves In Reporting Earthquake

THE EXTENSIVE telegraph set-up which is bringing America the running story of the undeclared Chinese-Japanese war enabled a report of the Manila earthquake of Aug. 20 to reach America before the quake shock waves, traveling through the earth, moved the seismological instruments in American earthquake detecting stations. This is the very rare case that forms the exception to the rule that most earthquakes are first reported by scientists.

Seismological stations in the Philippines, Hawaii, Canada, and the United States send in to two collecting centers, St. Louis and Science Service in Washington, the code reports on all earthquakes they detect. Science Service forwards this information to the U. S. Coast and Geodetic Survey, where an epicenter, or point of origin of the earthquake, is computed.

Although the so-called Manila quake was severe in that city, it is highly probable that the epicenter of the quake was perhaps hundreds of miles away. Early, tentative estimates of the earthquake's center of origin place it somewhere in the Pacific Ocean.

Science News Letter, September 4, 1937

PHARMACY

Medicines in Future May Be Grapefruit-Flavored

REMEMBER how orange juice was once used to disguise the taste of castor oil when that potent stuff was a standard household remedy? Castor oil has been made practically tasteless now, but pharmacists still need flavorings to disguise the taste of bitter or otherwise unpleasant medicines. Grapefruit juice promises the newest medicinal flavoring. Its advantages for this purpose, including its abundance, cheap cost and the fact that it contains vitamins A, B, C and G, were reported by David J. Mason of New York to the American Pharmaceutical Association at its recent meeting.

Science News Letter, September 4, 1937

E FIELDS

MEDICINE

Tetanus Treatment a 'Must' For Street Accident Victims

TETANUS antitoxin, the lockjaw preventive, should be given to every person injured in a street accident, even if the injury is only a small scratch or cut, physicians are reminded in a new warning by Dr. Eric C. Gilles of the Johns Hopkins University School of Hygiene and Public Health. (*Jour. A. M. A.*, Aug. 14).

The germ that causes lockjaw, or tetanus, to give it its scientific name, was found in nearly one-fifth of 63 samples of dust collected on down-town streets in Baltimore, Dr. Gilles reported.

Hospitals have recently been called old-fashioned for adhering to the custom of giving the tetanus antitoxin to all persons scratched or cut. The practice could be abandoned, some physicians argued, because since the disappearance of horses from the streets of most cities, street dust probably would not harbor the tetanus germs. These germs, according to generally accepted theory, regularly inhabit the intestinal canal of man and other animals.

Tetanus germs, however, are widely distributed in street dust even at the present day, Dr. Gilles asserts on the basis of his findings. Hospitals are thus vindicated in adhering to their practice of giving the antitoxin to all cases of street injury.

The fear that some persons sensitive to the serum of the antitoxin may be made temporarily ill by it is, in Dr. Gilles' opinion, not sufficient justification for failing to give this preventive.

Science News Letter, September 4, 1937

ANTHROPOLOGY

Ever See An Indian Dude?—Braves Thought Him a Sissy

SURE, there were dude Indians; right out in the Wild West. But the other fellows thought them sissies.

A description of a real Indian dandy is disclosed in a long-unpublished diary left by a Swiss artist, Rudolph Kurz, who roamed the Plains country almost a century ago. The Smithsonian Institution has just translated and printed it.

This well-dressed young Crow Indian is described by Kurz as wearing coat, leggings, and hood fashioned from a new Mackinaw blanket, and trailing carelessly after him another Mackinaw blanket, so as to display its eye-filling designs.

His bow and quiver were in two broad bandoliers beaded in coral. His rifle swung over his shoulder, rested in a sheath. He carried no less than three pouches laden with beads; and a knife sheath embroidered and fringed.

He enjoyed music wherever he went, provided by little bells on knife sheath and knee bands.

Kurz noted that this Indian was manifestly the darling of many girls who hoped to be his future wives. But other Crow braves didn't like him. They thought he was a sissy.

Science News Letter, September 4, 1937

ASTRONOMY

Comet, Outward Bound, Was Almost Missed

HAD it not been for the skill of Dr. Edwin P. Hubble, of Mt. Wilson Observatory, the comet which he discovered on Aug. 4 would probably have sneaked away from its visit to the center of the solar system without detection. It had already made a good start towards complete disappearance, for latest calculations of its path show that it was closest the sun on Nov. 22, 1936, when it was approximately twice as far away as we are. Now it is nearly four times the earth's distance from the sun.

According to calculations announced by the Harvard College Observatory at Cambridge, Mass., the comet will be about 265,000,00 miles from the earth in early September; a month later, 315,000,000 miles, and in November, about 380,000,000 miles. So far, no one knows whether it is periodic, so astronomers are unable to say whether it will ever return to the earth's vicinity. At its present distance from both sun and earth, it is so faint that it is only visible through very large telescopes.

The first announcements of the orbit of Hubble's comet indicated that it would be near the sun next December, at which time it would have also been near the earth, and would probably have been visible to the naked eye. This announcement was in error, however, because of a mistake in reporting one of its positions in the sky.

Science News Letter, September 4, 1937

PHYSICS

Noble Metals Now Coat Glass Only Atom Thick

A WAY of coating plates of glass, enamel and quartz with almost atom-thick layers of gold, silver, platinum and other precious metals so that neither mechanical, electrical nor chemical forces will strip them off, is revealed in a patent (No. 2,047,351) granted to P. Alexander, of Brussels, Belgium.

Silvered mirrors, for example, may be obtained to which the silver sticks most tenaciously.

The inventor has found that by first applying an almost atom-thick coating of some baser metal, such as iron, nickel, or cobalt to the surface, the layer acts like "glue" to hold fast the top coating of the more precious silver, platinum, of gold.

In an example of the method, while the plates to be coated are heated, the "glue" layer of nickel is deposited by what is called "cathodic dispersion." In this method the nickel is electrically broken into atoms and these are permitted to condense on the quartz plate to form a nickel layer of about four ten-millionths of an inch thick. In the same way the layer of platinum is deposited on top of this.

Such coated plates, states the inventor, can be heated to high temperatures without the layers cracking off. They can be used instead of wires for electric resistances. Sulfuric, hydrochloric and nitric acids even in concentrated solution, it is claimed, do not dissolve the layers away. Nor will they oxidize or rust.

Science News Letter, September 4, 1937

ZOOLOGY

Enraged Grizzlies Growl As 50,000 Visitors Stare

See Front Cover

THE angry grunts of enraged grizzly bears are a common sound at the Yellowstone National Park feeding grounds at mealtime. During July more than 50,000 people packed themselves into the feeding enclosure to witness a show seen nowhere else on earth. The enclosure is used to keep the public out; not to restrict the bears. As many as 58 grizzlies and three black bears have appeared at one time for their meals. While fights do start they rarely last long because food is plentiful and the fighting wastes time.

Science News Letter, September 4, 1937