

developed, declared two University of Michigan scientists, Drs. O. S. Duffendack and R. A. Wolfe, before the conference. So high a standard of purity is now required of common elements used in this industry that ordinary chemical methods are not good enough. The spectrograph steps in to do the job.

Dr. R. A. Sawyer, also of the University of Michigan, described new and speedier methods of studying impurities in cast iron and in steel which can detect the presence of chromium in one part in 10,000.

Better Guns

Uncle Sam is using the keen eye of the spectroscope, science's powerful research tool, to make sure he gets the best grade steel for his guns. This was told to the Conference by Major J. L. Guion, who explained how the instrument has replaced chemical analyses in the Army's efforts to detect impurities.

Particularly, the spectroscope has been used to test steel for molybdenum and vanadium, metals often found associated with steel. The best steel for guns or armor-plate has from four to six parts in 1,000 of molybdenum and one or two parts in 1,000 of vanadium. More than this, or even less, makes the steel brittle and liable to crack under pressure of repeated explosions.

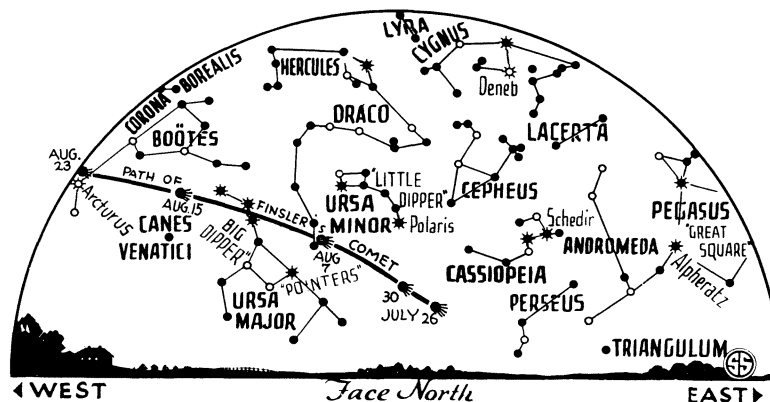
Tin can also be spectroscopically detected in steel, as was explained by Miss Mary E. Warga of the University of Pittsburgh. Tin, she said, is becoming more and more common as an impurity in steel largely because industry is using more scrap metal. The only accurate chemical methods of detecting it are long and tedious, she said, but the spectroscope has proved capable of keeping it within the desired limits, from two to nine parts in ten thousand.

Outside these limits, tin, like molybdenum and vanadium, causes the steel to crack. In this respect, Miss Warga said, the spectroscope was valuable not only in routine analyses of this type but for finding the cause of defects in steel, once they become apparent.

Science News Letter, July 31, 1937

If man's voice were as powerful for his size as that of the tree frog, he could be heard from eastern Washington State to New York City.

A statue recognized as Tutankhamen, because of its likeness to others, was found at Luxor with names of the kings who succeeded him carved on the figure, in place of his.



HOW TO FIND NEW COMET

Use this map to find the Finsler comet discovered on July 4 in Switzerland. Your unaided eye should see it, but a small opera glass will help. At the end of July, the Finsler comet will be seen almost due north and about half way between the Pole star and the horizon. About August 6 or 7 it will be almost on the line between the "pointers" of the big dipper and the Pole star. As it passes through the "handle" of the big dipper it will reach its greatest brilliance and be as bright as the star Megrez, the star in the dipper where the handle joins. The map shows the appearance of the stars in the northern sky at 10:00 p. m. on August 1 and at 9:00 p. m. on August 15.

ANTHROPOLOGY

America's First Humans May Have Become Extinct

Novel Theory Suggests Great Prehistoric Dust Storm May Have Wiped Out Ancient American Hunter of Sloth

AMERICA'S first human population may have become totally extinct, like the mammoths, giant ground sloths, camels and wild horses they hunted with the stone weapons now known to scientists as Folsom and Yuma points.

Dust storms may have been a cause of their disappearance.

These two novel points of view are offered for discussion by Dr. C. Bertrand Schultz of the Nebraska State Museum.

The idea of an extinct race of human beings in America is not new. Extinct races were credited with having built the famous mounds of the Mississippi valley and the Southeast, until research showed that the moundbuilders were Indians, and not necessarily the most ancient Indians, at that.

But the extinct race postulated by Dr. Schultz might well be as old as the cave-man peoples of the Old World—30,000 years or more. The Indians, or their ancestors, may be a much later arriving second wave of immigration from Asia by way of Bering Strait.

Says Dr. Schultz:

"Much new evidence strongly suggests that the 'people,' who lived at the same time as so many of these now-extinct mammals, disappeared from the central North American region at the same time as these mammals. Some great catastrophe must have overtaken the animals in that locality at that time."

Many entire families, such as the American horses, camels, ground sloths, and elephants were wiped out, as well as many genera, Dr. Schultz suggests. The cause of this extinction is not definitely known. Inasmuch as artifacts are often found with now-extinct mammals, it is possible man was a contributing factor in their extermination. Disease is often suggested as a cause.

"Dust storms are recognized as a very important element since twice before in the Pleistocene (early Sangamon and early Peorian) great dust storms apparently caused the extinction of some of the mammalian population and drove others to more liveable climates, perhaps to the Southwest or East," Dr. Schultz contin-