

tors move the clumsy structure to new "diggings." It travels at a speed of thirty-six feet per minute over two temporary railway tracks 450 feet apart under the middle of the bridge. Thus it wanders day and night through the open pit scooping up 58,000 cubic yards of coal in 24 hours, enough to fill 1,000 cars.

The huge machine is under the direction of a "commander" who has a stand as imposing as the bridge of an ocean liner, and from it he keeps in touch with all parts of the structure by telephone and remote control devices. Electricity for the operation of the bridge is supplied from a trolley at a potential of 5,000 volts.

Science News Letter, March 24, 1934

RADIO-METEOROLOGY

New Research Links Radio Layer With Weather

WILL the radio become an aid to the weather forecaster in making his prediction of the following day's sunshine or rain?

New evidence linking the ionization density of the radio reflecting layer of the upper atmosphere, and hence the intensity of radio signals with the weather on the ground, has been reported to *Nature* by Dr. D. F. Martyn, of the University of Sydney, Australia.

When night measurement of radio signals reveals that the layer which reflects radio waves of broadcasting frequency has a greater density of electrified particles than it had the preceding night, then the barometer invariably rises within 12 to 36 hours, Dr. Martyn found in experiments conducted under the auspices of the Australian Radio Research Board. In most cases the time lag is nearer 12 hours.

These results agree with those obtained by American scientists, Drs. R. C. Colwell and I. O. Myers at West Virginia University, measuring the signals from Station KDKA. The Americans interpreted them differently, however, concluding that this correlation between radio signal strength and barometric pressure indicates that the lower reflecting layer, which turns back waves of broadcasting frequency, is located in the region affected by changes of barometric pressure, while the short waves are turned back at heights not affected.

The experiments of Dr. Martyn strongly suggest the presence of winds in the high levels of the stratosphere, he said.

Science News Letter, March 24, 1934

ASTRONOMY

Used to Shooting From Hip, Plainsman Snaps Meteorite

IN THE NOVEL, "Cranford," (does anybody read that delightful old-fashioned tale any more?) a returned cousin from India, as mendacious as he is rich, tells of hunting on a Himalayan alp so high that when he fired at what he took to be a huge bird he found to his astonishment that he had "shot a seraphim." A feat quite as astonishing was really accomplished by a New Mexico rancher, Charles M. Brown, in obtaining the photograph reproduced on the cover of this issue of SCIENCE NEWS LETTER.

This, the first general publication of Mr. Brown's snapshot of a great meteoritic fireball, is in a way the commemoration of an anniversary, for it was just one year ago, on March 24, 1933, that the great flaming invader from outer space flared its way across the skies of the Southwest, visible to thousands of people in seven states.

Many photographs were taken of the persisting trail of the great meteorite after it had passed, but Mr. Brown's is believed to be the only one of its head—and indeed probably the only photograph that ever caught the head of any meteorite in its flight. To get such a picture requires a combination of quickness, skill and luck that would suffice to catch a snapshot of a cannonball. Probably nobody but a plainsman, born of a generation that survived the wild and woolly days largely through its ability to "shoot from the hip" could have taken the photograph.

Mr. Brown did not consider his feat unique at the time, nor even particularly extraordinary. The thing that interested him was the uniqueness of the meteorite, and that was why he wanted—and got—a picture of it.

He told his story to H. H. Nininger, secretary of the Society for Research on Meteorites. He had just sat down to a very early breakfast, a little before dawn on that memorable March morning, when the whole heavens suddenly lighted up. As suddenly, the thought "Meteor!" flashed into his mind. With Mr. Brown, action is almost as quick as thought. He snatched his camera off the top of the radio cabinet, was out of the house in a couple of jumps,

See Front Cover clear of the ranch buildings in about three more, pointed his camera and "fired." When the film was developed he found he had scored a clean hit.

When he told his story to Mr. Nininger, the latter could hardly believe that anyone could be quick enough to catch a snapshot of a meteorite in flight. He asked his host to repeat his actions, as nearly as he could, while he timed him. The rancher went through the performance from chair at breakfast table to snapshot "stance" in the open, in about eight seconds.

Finding actual pieces of the meteorite has proved to be a much longer task than getting its portrait. It was not until a couple of weeks ago that Mr. Nininger began receiving them, together with fragments of another, less spectacular meteorite that fell in the same region on August 8, 1933. Two of the fragments of the March 24 meteorite were found near its course of flight, as mapped by Mr. Nininger from data obtained last spring; they were 35 miles short of the end of its visible flight, and another fragment was found twelve miles farther along. Ranchers of the region are still searching for more pieces.

The fragments recovered from both meteorites are of stone, with no iron in them. Mr. Nininger states that they constitute an uncommon variety of aerolite.

Science News Letter, March 24, 1934

NERVES AND ALCOHOL

an address by

Dr. Carl C. Speidel

Professor of Anatomy, Medical School, University of Virginia

Wednesday, March 28, at 4:30 p. m., Eastern Standard Time, over Stations of the Columbia Broadcasting System. Each week a prominent scientist speaks over the Columbia System under the auspices of Science Service.