

The interval sorter speeds up the process of determining energy levels of spectra several hundred times, eliminating computations which in some instances total 100,000 in a single analysis. Prof. Harrison's machine makes automatic computations at the rate of 50,000 a minute, sorting out the wavelength intervals and recording them photographically at the same time.

*Science News Letter, December 8, 1934*

ARCHAEOLOGY

## Tragedy Tale 150 Years Old Verified by CCC Digging

A TALE of Indian tragedy has been checked and found apparently true by excavations of CCC workers, under direction of the North Dakota State Historical Society.

A village of Mandan Indians, so the old story goes, stood on ground where Fort Abraham Lincoln later was built. But 150 years ago, the Mandans went down under a double-barreled dose of trouble. First smallpox swept the village. Then, the weakened community was visited by the thing it feared most, a raid of wild Sioux Indians. Relentless, the Sioux burned the village, and the few surviving Mandans fled to take refuge with another tribe.

Excavation seems to bear out this story, says George F. Will, an authority on Mandan Indians, who has taken an active part in the investigation.

"Very obviously the topmost layer of the houses was destroyed by fire, as there is a great deal of evidence to that effect. There are a quantity of human bones, showing that as many as four or five children and some grown women were thrown into storage pits, presumably then empty. Since the Mandans always buried the dead outside the village on scaffolds, this is very good evidence either of widespread epidemic or of



MANDAN FIREPLACE FOR BOY SCOUT COUNCILS

*This earth lodge, exactly like those Mandan Indians used to build, has been constructed on Indian foundations at Fort Lincoln State Park under supervision of North Dakota archaeologists. Scout meetings, picnics and other gatherings may be held round the Indian-style fireplace.*

enemy attack. As none of these skeletons show marks of injury, it is probable these were victims of smallpox."

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PSYCHOLOGY-ECONOMICS

## President Called Better Psychologist Than Economist

PRESIDENT Roosevelt is considered "a better practical psychologist" but "a more amateur economist" by Dr. J. McKeen Cattell, who describes himself as "a professional psychologist, who is an amateur economist."

Dr. Cattell writes under the title "A Scientific Approach to Emotional Problem." (*Scientific Monthly, December*). He is former professor of psychology in the University of Pennsylvania and Columbia University and is editor of *Science* and other journals. He says:

"It is alleged that one of those dubbed 'brain trusters' has asked what part of the body can be trusted better than the brain. The difficulty is that some of those in the saddles at Washington tend to trust the heart rather than the brain. A scientific approach to the emotional side of economic problems is not easy."

Discussing one phase of the economic situation and the new deal, Dr. Cattell says:

"It may be that in a period of depression work should be shared with the unemployed by prescribing a short day's

This village was inhabited when the Mandan culture was at its highest, the excavations reveal. Tremendous quantities of pottery of very high type are among the objects unearthed. Two fragments of pots are decorated with conventionalized turtles, which Mr. Will pronounces the first naturalistic designs ever discovered on Mandan pottery.

Nearly a bushel of good quality corn, well preserved by having been burnt over, was found in a village storage pit that was not cleaned out when the inhabitants were driven from home. This corn shows the braided husks and the ears, just as Indian women used to braid them to hang up for a reserve of seed corn.

A number of earth lodges such as the Mandans built are being erected in state park areas, for their historical interest, and these will be put to practical use for scout meetings, picnics and other gatherings. (*See SNL, Feb. 14, 1931, p. 109*).

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## VITALISM and MECHANISM A DISCUSSION

between  
HERBERT V. NEAL  
Professor of Zoology, Tufts College

and  
JAMES F. PORTER

Being a survey of these opposing theories from the point of view of a scientist and a layman.

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work, though this is doubtful. As a permanent policy it would be disastrous. Before the industrial revolution most men, women and children worked twelve or more hours a day and got black bread, hovels and lice; people died at the average age of thirty years or earlier. Now, thanks to the applications of science and the better organization of society, child labor has become intolerable; eight hours of work for six days a week will provide the necessities and many of the comforts of life. The average length of life has been more than doubled.

"Thirty hours of work a week will today supply the necessities of life, but not the comforts. The hours should not be longer than is compatible with the health, happiness and efficiency of the worker, but it seems that he should be permitted to work thirty hours a week and live meagerly, or forty-five hours and have 50 per cent. more money, which could be used for bathtubs, telephones, radios, cars and children."

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