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FRANCISCO EXAMINER:

ELECTRIC BRAIN TESTS POWER

An "electric brain" to measure high voltage power has been devised by Dr. Harris J. Ryan, Stanford's "wizard" of electrical engineering, it was revealed yesterday by Prof. J. Snyder Carroll, director of the university electrical laboratory and assistant to the inventor.

Known to science as the "million volt wattmeter," it is termed the "brain" because it eliminates the necessity for involved calculations to measure high voltage power.

A giant spark gap of 1,000,000 volts and a tiny magnetic needle have replaced the old "trial and error" method of power line design. The needle is the sensitive recorder of the "electric brain."

"We were required to build the 'brain' in order to test copper cables for the Hoover Dam and carry out research work here at Stanford. Atmospheric losses will determine the success or failure of the project, and we have been experimenting here to supply specifications," Professor Carroll said.

"Our experiments carried out by the 'brain' show that hollow copper cables nearly two inches in diameter are needed. A voltage of 285,000, higher than any used at present, will be necessary to send the current over the mountain to Los Angeles, which is 300 miles from the power plant."