Dr. Carmichael will become the seventh Secretary of the Smithsonian Institution when he takes over his new duties in January 1953. He succeeds Dr. Alexander Wetmore, who reached the age of retirement in June 1951.

Dr. Wetmore, a distinguished ornithologist, desires to give his full time to his scientific reasearches, but consented to serve until his successor could be elected and assume the duties of the position.

In 1938 Dr. Carmichael was unanimously elected president of Tufts College by its Board of Trustees. During his administration, he continued his research work in the field of sensory psychology and physiology and has published books in this field.

He is a member of the National Academy of Sciences, the American Philosophical Society, former president of the American Psychological Association, former chairman of the American Council on Education, and belongs to numerous other professional and scientific societies in this country and abroad.

During the second World War, Dr. Carmichael was director of the National Roster of Scientific and Specialized Personnel. This agency listed and mobilized the nation's scientific workers for the war effort. He is now a member of the Naval Research Advisory Committee and of advisory committees to the Research and Development Board of the Office of the Secretary of Defense and to the Veterans Administration.

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SEISMOLOGY

Oklahoma Center for Mild "Unusual" Earthquake

➤ THE EARTHQUAKE that shook six southwestern states Wednesday (April 9) was "very unusual," seismologists at the U. S. Coast and Geodetic Survey said in Washington. Reports from the delicately balanced instruments that record earth tremors were received from all over the country. Seismologists pinpointed the earthquake's epicenter 35.5N and 98W.

This is close to El Reno, Okla., and was also near the epicenter for the last two earthquakes that rocked Oklahoma, one in 1918 and one on Aug. 19, 1933. All three quakes have had an intensity of about six. This is a non-instrumental rating indicating slight damage in poorly-built buildings, that furniture is moved, and that persons in the area become frightened and alarmed.

Earthquakes occur when the strains and stresses in the earth's crust become too great and are adjusted by sudden slips and breaks. The Oklahoma earthquake was only a slight adjustment of the crust, such as occurs somewhat more often on the east and west coasts, than in the midwest states.

This earthquake occurred when the vast underground Nemaha mountain range, extending from Nebraska to Oklahoma, shifted slightly, causing tremors recorded in Iowa, Kansas, Missouri, Nebraska, Oklahoma, and Texas.

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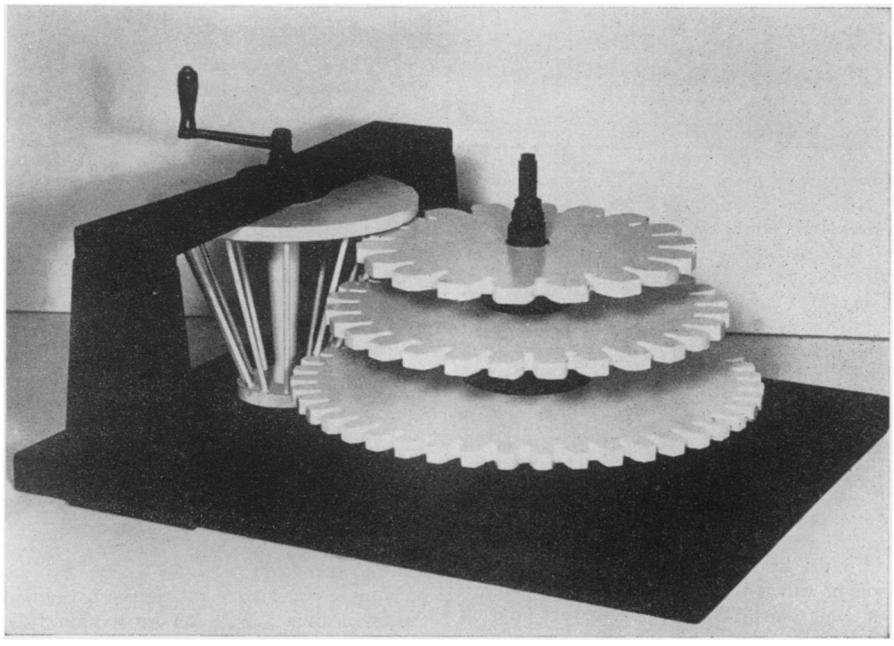

DA VINCI INVENTION—A variable speed drive meshed three cogged wheels of different diameters with the same lantern wheel to obtain different speeds of rotation in the da Vinci invention. The idea shown in this model is found today in our modern automobile.

GENERAL SCIENCE

Leonardo DaVinci, Scientist

➤ SCIENTISTS AS well as artists are celebrating the 500th anniversary of the birth of Leonardo da Vinci, born April 15, 1452.

Leonardo is best known for his great paintings such as Mona Lisa and The Last Supper. But he was also a creative genius in the fields of anatomy and physics as well as aviation. He was a prolific inventor.

The modern helicopter had its prototype in Leonardo's invention of an aerial screw to be operated by clockwork. This device was also the forerunner of the airplane propeller. Leonardo's "tent of linen" was the first successful parachute.

His also was the first known self-propelled vehicle, a kind of flat car driven by a spring. His device for lifting heavy weights looks remarkably like that necessary automobile tool, the jack.

Leonardo invented a projector for throwing an enlarged image of an object onto a screen. This projector, illuminated by a candle, was the prototype of the magic lantern and later the motion picture projector.

Leonardo, who was chief military engineer of Cesare Borgia, was responsible for many military inventions. They include a machine gun, aerial bombs, a steam gun, shrapnel, and a diver's apparatus. The last, Leonardo never completed because he was afraid it might be used by men working under water to damage ships.

As an artist, he was interested in the accurate portrayal of human and animal figures and this led him to a detailed study of anatomy. He was the first to show a fetus in its proper position within the uterus and the first also to show a double curvature of the spine.

He made a detailed study of the positions and movements of birds in flight and this inspired him to design a flying machine with wings like a bird's. The pilot was to lie prone in the frame and flap the wings by moving his feet in stirrups attached to a pulley system. At the same time he was to operate a windlass with his arms to guide the machine.

In spite of his many scientific discoveries, observations and inventions, Leonardo never published a book or scientific article. All we know of his scientific work has been gleaned from voluminous notebooks profusely illustrated by his own drawings. His notes were made extremely difficult to decipher because Leonardo, a lefthanded man, wrote in a reversed handwriting which could only be read by the aid of a mirror and he used many abbreviations. For over 250 years the material remained unknown. Venturi's first discussion of his notebooks was dated 1797 although Leonardo died in 1519.

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