

tion which Hals had given his model. The superimposition of the two drawings showed an almost absolute agreement. On the other hand, other drawings made under the same conditions of several skulls taken at random, showed notable discrepancies. The same experiment was repeated with the other portraits of Descartes, namely, that by Sebastian Bourdon in the Louvre; that of Beck, of which there is a copy in the library of the institute, the terra cotta medallion of the Versailles Museum, and an old portrait by an unknown painter belonging to M. Rulhe, of Courvevoie. The comparison of the skulls in these different portraits with that of the museum shows some striking resemblances, but never so complete an agreement as was found with the Hals portrait. Before Dr. Richer began his investigation much the same procedure was employed by Dr. Verneau, professor of anthropology at the museum, who came to the same conclusion. As a matter of history it is known that the skull was detached from the philosopher's body in 1666 by Israel Planstrom, Captain of the Queen of Sweden's Guards, and it was given to the French nation by Berzelius. Now that the relic has been satisfactorily identified, it is suggested that it should be placed in the coffin which contains the decapitated skeleton of the philosopher. This is in the Church of Saint Germain des Prés, where it lies in one of the chapels between the remains of Mabilion and those of Montfaucon. Another suggestion is that the skeleton and skull might be solemnly transferred to the Pantheon in accordance with a decree of the Convention of October 2, 1793, to which effect was never given. At a meeting of the Académie des Sciences on January 20, Professor Edmond Perrier declared that the identification having been made conclusively, it was no longer right that this relic of the great thinker should be left amidst the collections of the gallery of anthropology and paleontology in the museum. He undertook to have a kind of reliquary constructed in one of the rooms of the museum where there are already relics of other famous men. There the skull of Descartes will be

deposited, together with the documents establishing its authenticity.

UNIVERSITY AND EDUCATIONAL NEWS

TENTATIVE plans for buildings to replace the burned College Hall of Wellesley College provide for a quadrangle, including four buildings, on the old site. It is expected that the college will be able to reopen on April 7.

AMHERST COLLEGE has received a bequest of \$5,000 for a scholarship under the will of Addison Brown, late of New York, and a non-graduate of the class of 1852.

UNDER the will of the late Dr. Rosewell Park the medical department of the University of Buffalo will receive his entire medical library of about three thousand volumes.

THE valuable psychological library of Dr. Arthur Henry Pierce, late professor of psychology at Smith College, has been given to the college.

It is said that the secretary of the interior has written to the chairman of the house committee on education expressing disapproval of the bill to establish a national university.

THE first structure that the Massachusetts Institute of Technology has erected for its own uses on its site in Cambridge is the new aerodynamic laboratory. The building is finished and the apparatus is in process of installation. The portion of its equipment that is first to be installed is the four-foot wind tunnel with its accompanying blower. This is of the pattern now in use at the National Physical Laboratory at Teddington, England, which has furnished the plans.

It is expected that a school of fisheries will be established at the University of Washington. If the plans mature, the resulting school will be the first school of its kind in the United States, though there are such schools in Japan and other countries.

PROFESSOR FREDERICK SLOCUM, who for the past four years has been in charge of the solar observations and stellar parallax work at the Yerkes Observatory, has been elected professor

of astronomy at Wesleyan University, Middletown, Conn., and will assume his new duties in the autumn. A new observatory will be erected immediately as a memorial to the late Professor Van Vleck, for many years in charge of that department at Wesleyan.

DR. WILLIAM C. ALPERS, formerly a trustee of the College of Pharmacy of Columbia University, has been appointed dean and professor of pharmacy of the pharmaceutical department of Western Reserve University.

MR. ROBERT N. HOYT, '09, has been appointed by the corporation of the Massachusetts Institute of Technology special lecturer on public health administration.

MR. SEARCY B. SLACK, B.S., Georgia, '11; A.M., Harvard, '12, has been appointed adjunct professor of civil engineering and road expert at the University of Georgia.

PROFESSOR BURTON H. CAMP, who has been associate professor of mathematics at Wesleyan University, has been advanced to a full professorship.

DR. ELLIS M. FROST, instructor in clinical medicine and microscopic anatomy in the School of Medicine, University of Pittsburgh, has been appointed to the position of director of the department of health of the university.

DISCUSSION AND CORRESPONDENCE

SMALL AERIALS AND THE STRENGTH OF WIRELESS SIGNALS

FEW persons realize the ease with which wireless signals, such as are sent from the Navy station at Arlington, Va., and Sayville, Long Island, may be intercepted and read, even when one is some distance from the sending station.

In connection with some experiments on the effect of foliage, humidity, etc., on the strength of the wireless signals sent from the government station at Arlington, the writer was impressed by the large amount of power intercepted by an aerial erected on the university campus and an attempt was made to see if these signals could be read with a much less pretentious aerial. During the writer's

summer vacation spent near Morgantown, W. Va., on the banks of the Monongahela River, a T aerial consisting of two No. 18 wires, 100 feet long, was stretched up between two trees on the side of a hill at the back of the camp. This aerial was approximately 30 feet high and 50 feet from the top of the hill. There were quite a few trees in the neighborhood of the aerial and in most cases they extended well above the highest point of the aerial. Some difficulty was met with in trying to find a satisfactory ground connection, but as soon as that was secured the "time signals" could be heard very clearly even in the brightest sunshine and on the warmest days of last August.

Upon the writer's return to Morgantown he found that not only the "time signals" from Arlington but the Sayville Long Island press dispatches could be heard with a T aerial consisting of three No. 18 wires, 30 feet long, fastened to the rafters in the attic of his residence. Later experiments showed that both these signals could not only be heard, but were loud enough to be read by using an ordinary iron bed with a wire soldered to the middle of one side for the aerial. The bed was located on the second floor of the house and was about 12 feet above the level of the street.

The receiving apparatus consisted of a Navy type of loose-coupled receiving transformer, a variable condenser, a silicon detector used without batteries and 1,000-ohm telephone receivers. A gas pipe leading to a gas stove in the room served as the ground line.

Morgantown is 162.3 miles from Arlington, Va., and 374.6 miles from Sayville, Long Island, with both the Blue Ridge and the Allegheny Mountains between. The peaks of some of these mountains rise as high as 2,200 feet above the top of the writer's residence and for the most part are covered with forests. In view of the distance from the sending stations and the mountainous character of the country over which these signals are transmitted the results obtained with these low and small aerials seem to warrant this brief description.

C. W. WAGGONER

WEST VIRGINIA UNIVERSITY,
MORGANTOWN, WEST VIRGINIA