

TECHNICAL REVIEW.

Neils R. Finsen, graduate of Copenhagen University in 1890, although well trained for a doctor's profession, found himself unable to follow it on account of physical weakness; so he accepted a position as preceptor in anatomy at the University of Copenhagen. Believing that light could be used to cure disease, he took upon himself the task of finding its healing value. He tried the action of lights of different colors upon animals and found that blue, violet and ultra-violet (the chemical rays) were the only ones valuable for his purpose. In 1893 he published a paper with the title, "The influence of Lights on the Skin" in which he announced a light treatment to prevent the scars usually left by smallpox. This treatment consists in keeping the patient in a room to which only red light is admitted. This results in the prevention of suppuration, the most dangerous and most painful stage of the disease, and effects recovery without the appearance of scars.

Soon after the publication of this paper, Finsen discovered that the chemical rays kill bacteria and that they should be useful in treating skin disease of bacterial origin. He made his first test in 1895 on Neil Morgensen, an engineer of Copenhagen, who was suffering with lupus. This disease is caused by the tuberculosis bacterium becoming active in the skin, instead of in some internal organ. Finsen went to work concentrating the sunlight upon the sore by means of a hand lens, first removing the red rays and rendering the light cool by passing it through blue water. This treatment was continued for one or two hours each day for six months, by which time the cure was complete.

Within a month Finsen was offered room in the grounds of the Commune Hospital of Copenhagen, where he began to apply himself to

increasing the penetrating power of the rays, for at the best they enter the body only a fraction of an inch. He found that the rays penetrate farther when the skin is rendered white and bloodless by pressure, and also found the electric arc light much richer in these rays than the sun.

The Finsen light, as finally used, consisted of an 80-ampere arc light carrying four telescope-like tubes which contain quartz-condensing lenses and water for cooling. This arrangement enables four patients to be treated from one lamp.

The patients lie on cots, while the nurses direct the tubes so that the rays are focused upon the diseased parts, and at the same time press the spot with a water-filled glass, which serves to drive out the blood and help cool the light. The treatment lasts for one and one-quarter hours each day, the cost for treatment being \$17.00 a month for poor patients and \$28.00 for those who are in better circumstances.—Cash Tech.

In "Mines and Minerals" for February there is a very good description of the Vesta Coal Co. mines at California, Pa. by William L. Affelder '99. The article is illustrated by photographs and drawings and is well worth reading. Mr. Affelder is Superintendent of the Mosgrove Coal Works near Kittanning, Pa.

The Most Popular College Songs.

We have just received a copy of "The Most Popular College Songs" published by Hinds, Noble and Eldridge of New York City. The collection contains all the songs dear to the college man's heart, re-arranged and put forward in a new and inviting form. We can heartily recommend it to any one looking for an up-to-date collection of the latest as well as the old and ever popular college melodies. Price \$1.50.

Rules for Inter-Class Debates.

The Debating Club on Saturday evening Feb. 11, adopted the following rules to govern inter-class debates for this year:—

The subject of inter-class debating shall be brought before the different classes and a committee of three appointed from each to act as representatives of the classes.

The committees of the contesting classes shall make arrangements for the trial and inter-class debates as follows:—

The English department shall be requested to submit a number of questions one of which shall be then chosen by one of these committees. The choice of questions shall be by lot, the losing committee having choice of sides.

The same questions shall be used for both trial and inter-class debates except that the Seniors and Juniors shall use a different question from that used by the Sophomores and Freshmen. The trial debates shall be held March 3rd and 4th and the class debates, the 24th and 25th. The final prize debate April 14th.

The winning teams of the inter-class debates shall constitute the teams for the prize debate.

It is suggested that the judges at trial debates shall consist of two professors and one man from the contesting class who shall be chosen by the committee from that class.

The judges for the inter-class and prize debates shall be chosen from members of the Faculty, each committee to choose one judge and these two judges to choose a third.

Change of date.

Owing to circumstances entirely beyond the control of the Management of the Y. M. C. A. Course, it has found necessary to change the date for Packard, The Humorist, from March 4th, to about the middle of April. The exact date will be announced as soon as it is definitely settled upon.