might have been enriched by the labours of Aristotle and Ptolemy. As the great mass of fixed stars appears to move in a common phalanx, sweeping around the earth with unvarying motion from age to age and keeping the same positions in relation to each other, it became to our ancestors difficult to conceive any explanation which did not introduce a rigid bond of connection between the members of this great system. Hence they found an easy explanation in the supposition that the stars were brilliant points of light fixed in the surface of a great sphere of crystal, which revolved about this earth as a centre, and thus carried the stars along with it. This formed the outer sphere, which enclosed within it a series of concentric spheres carrying the sun, moon and several planets respectively. These spheres were supposed to be so perfectly crystalline as to be quite invisible, and their motion, as they rolled within each other, formed a sort of harmony known as the "music of the spheres," which was so etherial in character as to be inaudible to mortal ears, but reserved for the delectation of the gods. Fancy the astonishment of Hipparchus or Aristotle could they have been brought to believe that one of these points, which they so complacently fixed upon their outer sphere, is some millions of times larger than this earth which they had made their centre of motion! Who first manufactured the spheres and fixed them into their places we do not know, but the system was taught by Pythagorus about 560 B.C.; it was extended and brought more into unison with observation by the mighty genius of Aristotle about 360 B.C.; he was succeeded by Hipparchus from 160 to 125 B.C., and he again by the great author of Almagest 150 B.C., who made some modifications and added some new machinery, while still adhering to the fundamental principle of crystalline spheres. But even in the changes which this cumbrous system underwent we have a gradual progress towards the true constitution of the solar system. It is possible that the man who first proposed the existence of crystalline spheres was quite satisfied with his theory, but as men got more extended notions of the universe and the positions of the sun and earth mistrust of the cyclic theory began to encroach upon their orthodoxy. Even Pythagorus ventured the idea that the sun might be the centre of the universe, but tradition and education outweighed ill-defined theories and bare possibilities. The world was not prepared for a higher ideal of the universe until Copernicus, in the beginning of the 16th century, proclaimed that system of the universe which, by being associated with his name, has rendered it immortal. Succeeding Copernicus was Tycho Brahe, about the middle of the 16th century, who rejected the Copernican theory and adopted a modification of the Ptolemaic one, primarily because he had an inadequate idea of the sun's distance from the earth, and finally of the real dimensions of the visible universe. The lecturer then brought before the audience some considerations in regard to the methods by which astronomers determine the distance from the earth. In going over these he resorted to a little simple geometry which alone was the science which measured the universe. Methods divide themselves into three:

(1) Geometrical methods.
(2) Physical methods.
(3) Mechanical methods.

Under the former heading he discussed the manner of measuring distances upon the earth; parallax and angles; the reason why the sun's distance cannot be obtained as the moon's; transits of Venus, and what is meant by the term; why we do not have a transit at every conjunction; the years when the transits have occurred, viz., 1631, 1639, 1761, 1769, 1874, and to occur in 1882 and 2004; visibility of transits in different parts of the globe; the appearance and the application of photography in observing their progress; opposition of Mars, opposition of Flora, Ariadne, etc. In connection with the physical methods he alluded to Roemer's discovery of the velocity of light, which he illustrated; the possibility of measuring light, accompanied by a diagram of Fizean's and Foucault's experiments, the origin of the latter being explained. In referring to the mechanical methods he dwelt upon the monthly equation of the earth, the lunar inequality, and the perturbations of Venus. To the question, Of what use or advantage is all this to mankind, individually, or to the world at large? he had two answers to make. (1) Scientific men do not look as a rule to ultimate results. They pursue science merely on account of science, and because they love the discovery of truth. (2) It is seldom possible to predict the ultimate benefits which come to mankind from any discovery, for oftentimes things which appear to be but trivial in their character lead to the most wonderful results. Where is the utility of all research, historical, mental or physical? We who are enjoying the rich gifts which it brings can scarcely estimate their value. But take away our science and the clouds of ancient ignorance and error shall settle down like some gloomy nightmare upon an enlightened world. Take away our science, and along with it our arts and our civilization, and our consequent greatness will depart, and

"Like the baseless fabric of a vision,
Leave not a wrack behind."

TUESDAY.

On Tuesday, April 26th, a feature altogether new was introduced, viz.: the holding of a special Convocation for the hearing the Valedictory Addresses of the graduating classes, and the reading of the University Prize Poem by the author. The Glee Club and students were stationed in the gallery and made things noisy before the entering of the members of Convocation, by singing snatches of the most popular chants. Notwithstanding the bad weather the hall was well filled when at precisely 3 o'clock the Chancellor, Vice-Chancellor, Professors, and other members of Convocation filed in and took their seats on the platform. The Principal announced that five poems had been sent in for the prize offered by the Senate and that the competition had been keen. The Senate had obtained outside criticism, and after much consideration had agreed to award the prize to a freshman—Mr. T. G. Marquis, of Chatham, N.B., (applause), and called on him to read it. Mr. Marquis is a pupil of the poet Roberts, who has evidently instilled into the prize poet of '81 some of his own poetic spirit and talent. The subject was a classical one, being the story of "Nausicaa" from the Odyssey, expressed in simple and easy verse, which showed undoubted poetic talent. We reserve it for publication next session.

The "gallery" then rendered *Gaudeamus igitur* to an appreciative audience (of the words, not the sentiment).

DR. J. H. BETTS.

The chosen representative of the graduating class in Medicine, was then called on to give the valedictory address for that class. Dr. Betts' address was most eloquent, but he spoke in too low a voice to admit of its being fully appreciated.

He was certain that among the mingled feelings which found a place in their breasts to-day, the prominent one was that of sincere regret. Partings were always painful, but when that parting involved not only a separation from companions, but also the severance of ties which