the year 1882, wholly incompetent, through a want of experience and the necessary culture. When it is considered that an appeal against the decision of the examiners is practically useless, and that grave injustice has been done, in not a few cases, through the carelessness and incompetence of some examiners, the great importance of choosing the best men available must be evident. The present system of appointing raw youths, deficient in experience and culture—graduates whose knowledge is encased in the rust of years of mental inactivity—tends to degrade the University in the eyes of educationists.

I have in a very brief and imperfect fashion presented these subjects for University reform. The little interest taken in University matters by the bulk of the graduates is not creditable to their intelligence or public spirit. A few men, living in Toronto and vicinity, constitute the majority of the attendants at Convocation. The proceedings of that body are not calculated to inspire the lover of true education with hope of much progress. Unfortunately, the bulk of those who meet to discuss University affairs are not men possessed of a practical knowledge of educational matters, and the result is fruitless discussion, and resolutions having more reference to forms of procedure than to the true purpose of University education, viz., the development and strengthening of the higher faculties of the mind.

A BILLION DISSECTED.

A CURIOUSLY interesting letter appeared in the London *Times* a few months ago from Mr. Henry Bessemer, under the heading "A Billion Dissected." The writer tries to convey to the ordinary mind some idea of what a billion is—"a modest 1, followed by a dozen ciphers. [This is by the English notation—a million millions, or 1,000,000,000,000. In this country we use the French system, which reckons a thousand millions, or 1,000,000,000, as a billion. The English reckoning seems to be the more strictly correct.] He does this by means of illustrations drawn from familiar objects of thought and sight. The result is such as will surprise many. Attention is thus called to a billion as a measure of time, distance or weight. When we speak, for example, of a billion of seconds, we perhaps suppose that since the commencement of our era such a number had long since been measured out. Arithmetic shows us, however, that we have not passed *one-sixteenth* of that number in all these long, eventful years—for it takes just 31,687 years, 17 days, 22 hours, 45 minutes and 5 seconds. A billion of sovereigns would extend, when ranged side by side in piles of twenty feet high, so as to form two parallel walls, a distance of 2386½ miles; or if placed on the ground so as to form one continuous chain by each sovereign touching the one next to it, such a chain would encircle the earth 763 times. The weight of the same sovereigns would be 6,975,447 tons. As to altitude, we are informed that a billion sheets of the *Times* "superimposed upon each other, and pressed into a compact mass, would reach to a height of 47,348 miles." Most readers who follow such statements as these will be disposed to agree with Mr. Bessemer that "a billion is a fearful thing, and that few can appreciate its real value;" and that "as for quadrillions and trillions, they are simply words wholly incapable of impressing themselves upon the human intellect." And yet one cannot help suggesting, what are even these baffling conceptions as to time compared with eternity? We may well use such a word with awe!—*Ex.*