

## LECTURE ON OVERTONES.

At Newcombe's Hall, on the evening of Dec'r 10, a lecture upon "overtones," was delivered by Prof. Haanel, of Victoria University, Cobourg.

The lecturer first stated that all sound was caused by the vibration of some body, that this vibration was imparted to the air, that the air beating upon the *tympanum* of the ear conveyed through that organ to the human "spirit," the sensation of sound. That these vibrations were of two kinds—periodic, *i. e.* rythmical; tumultuous and disordered. The former were distinguished as musical sounds, the latter as noise sounds. As a body of water that has been agitated by impact, throws out little wavelets in concentric rings in all directions, so the air, agitated by the vibration of some solid body, throws out little wavelets in circles in all directions; and so long as these undulations are periodic, like the long swell of the lake, they produce a *musical* sound, but that when driven by violence into and against one another; like the lake in a storm, their periodic and rythmical form is destroyed, disorder results, and they produce a *noise* sound. The lecturer then stated that all the sounds produced by musical instruments of human construction were not wholly pure, but in addition to a certain amount of noise sound, every musical sound consisted of a fundamental and attendant tones called "over tones," which, varying in different instruments, give to them their individuality. In like manner the human voice is a mixture of vowel and consonant sounds, the vowels are musical sounds, the consonants noise, and it is due to the varying mixture of vowel with consonant sound (*i. e.* musical with vowel sounds), that enables us to distinguish the voice of one person from another. A musical sound consisted of a fundamental tone and attendant upper sounds, these latter were called "over tones." The lecturer likened these to the lesser wavelets which rise upon the long, undulating swell of the ocean or lake, which, while they do not break the uniform motion of these undulations, serve to reflect the rays of light, and thereby give a sparkle and brilliancy which would be absent on a perfectly glassy sheet. Prof. Haanel stated that the lowest number of vibrations in a second of time which the ear could recognize as a musical sound was 20, the highest about 38,000; this would comprise about *eleven octaves*, though 4,600 was the highest number in general use as produced by our musical instruments, comprising about eight octaves. Rapid as were these vibrations, and delicate the organism of the ear capable of transmitting them, they were stationary as compared to the rapidity of the vibrations necessary to convey to the eye the sensation of red (the lowest of the color tones), which was shown to be the incredible number of 360,000,000. Prof. Haanel concluded by saying that all the physical phenomena of nature were conveyed to our consciousness by means of vibrations, and that beyond the *violet* it was impossible to conjecture what phenomena might exist, that now we see through a glass darkly but in a future state when freed from the physical organisms through which we now receive sensation, we shall see clearly face to face.

## PICTURESQUE CANADA.

Through the kindness of the publishers of "Picturesque Canada," we have seen, previous to their being sent to New York for engraving, the drawings upon wood for the first number of this publication shortly to be issued. Hitherto, unfortunately, it has too frequently happened that the artist (or party serving that office), has thought fit to represent our country in her winter garb. Huge piles of ice, wolves, snow shoes, dreary wastes of snow and fur clad hunters have formed the chief subjects, the consequence of which is to impress people elsewhere who are not acquainted with the facts, that Canada is a place of perpetual winter. "Picturesque Canada" will assist to dispel these ideas; and although some of the illustrations will portray our country in her snow clad garments, the larger portion will represent her in a more happy phase. The drawings which we were permitted to see (thirteen in number) were executed by men of well-known ability; the *engraving* has been entrusted to able and experienced engravers, and we may therefore confidently look forward to a work which shall represent Canada as she really is, and at the same time be evidence of the skill and ability of her artists in illustrating it, and the courage and enterprise of her people in projecting and executing it.

## THE POWER OF MUSIC.

(By A. Lampman, jr.)

'Tis Christmas eve—that time, when as one sits and dreams before a blazing fire, stirring music, chiming in strangely with the whistling of the storm without, the beating of the snow against the freezing window, and the solemn thoughts that rise in one's own breast, seems to awaken more powerful emotions than at any other season of the year.

The old musician reclines in his easy chair; the lamp-lights are beaming brightly, and brightly too the merry faces that gather round him, while a pair of slender fingers wander nimbly over the almost living keys of the soft-toned piano, the fairest of the genii, that preside over the tender world of sound, every one of whose ringing notes seems like an impassioned spirit, that helps with its own delicate silver cord to draw open the glorious gate of that garden of Paradise, where the soul, as it listens to sweet music, enters, and revels among its fairest, favorite visions. The silence deadens; the music flows on, and the old man's thoughts are no longer with the real; they have yielded to the spell, and passed into the realm of hopes, and tender dreams. This is the charm of music. The fair fingers of the pianist fly swifter and swifter, the ivory white keys dance in glee, and, as the rapid music rings from them, his thoughts drift away into a well remembered scene of the past—a great ball-room—his feet are skimming the polished oaken floor,—fair forms flit around him—exquisite music is ringing in his ears, music that he can never forget—a fairy figure is at his side, and a wild exulting joy in his heart. The strain changes, the dream fades, a grand full burst of solemn music pours upon his waiting ear, some glorious anthem that one of the prophets of music penned in an hour of poetic enthusiasm, the old man's soul is uplifted; all his past dreams of sacred ambition, dreams of goodness and philanthropy, dreams of greatness, of divine aspiration stream into his heart again, and burn amid the