bottom of the vessel, while the drops stop midway. We conclude from this that the annulax vortex is a form very favorable to progression.

In the subject under consideration there is more than one detail to be cleared up. As the duration of oscillation of the drops is a function of the superficial tension, every cause that modifies the latter acts likewise upon the duration of oscillation. It suffices, for example, to open a bottle of alcohol or ether in the vicinity of the apparatus in order to modify the phenomenon immediately.

Does electricity exert an action, as some authors think? Do the drops that closely follow one another act upon each other in such a way as to modify the velocity of their fall? What is the influence of a vertical wall in the vicinity of the drops? Such are, among a large number of questions that are proposed, three of the most pertinent. The study of them has been prosecuted after a manner, but it can be entered into more deeply. The second, in particular, is of a nature to furnish us with data relating to the much-debated role of bicycle trainers. As may be seen, the contest opened by the Swiss Review of Photography embraces a very vast domain, and the amateurs who have taken part in it have had only the embarrassment of choice to develop such or such a point.—C. E. Guillaume, in *La Nature*.

PRONUNCIATION OF WORDS IN SINGING.

By L. B. PARSONS.

THE singer who aspires to become a church soloist should have, in addition to a pleasing voice under good control, the art of pure and distinct enunciation. The lack of it is simply inexcusable, as it may be acquired in a very short time. The mistaken idea seems to prevail that the English language is unmusical and difficult to articulate in singing, many claiming that the Italian is much easier to acquire. The rules that govern Italian words should govern our own, and by Italianizing our vowel sounds our own language may become much more musical both in speech and song. Musical elocution in different keys is something of an art, but the organs of speech may be so trained that it will be a pleasure to sing our own language.

Every vowel should be sung with equal ease, and never should the word be sacrificed for the tone, as is so often the case, for the vowel should be a part of the tone. Our English vowels, as commonly pronounced, have double sounds, as *a*, pronounced much like *a-ee*; *o*, like *o-oo*; *i*, *i-ee*; and *u*, *e-u*. In the more cultured these are less noticeable; for one who has a knowledge of at least one other language than his own is more apt to have a better appreciation of the pronunciation of words.

The great Lamperti could never rest until he had completely changed the vowel sounds of his English-speaking pupils. To obtain purity and evenness of vowel sound, practice should be given with one breath on a single tone, using the vowel sounds *a*, *e*, *i*, *o*, *u*, *ä*; also the syllables, in one breath, *do*, *re*, *me*, *fa*, etc. These exercises should be sung on single tones as high and as low as the voice can reach with ease. When this can be done without effort as high as the voice can reach, the pronunciation of words in singing becomes a simple matter. A particular point to be emphasized regarding consonants is that they be attacked quickly, with precision, and instantly joined to the vowel. We can all recall singers who emphasize the last consonant of a word so vigorously as to make an extra syllable of the word, making home sound like *home-a*; sweet, *sweet-a*; and many others equally ridiculous.

A slight rolling of the *r* at the beginning of a word is often effective, but it must be done delicately. In the words heart and Lord a rolled *r* makes them hear-r-ut and Lor-r-ud, completely spoiling the character of the words.

Sacred song calls for the best enunciation, as the sentiment of an anthem or hymn is the all-important thing, and the more perfectly it can be expressed the more does it become a part of the service. Sacred song also calls for truest art and sincerity of feeling, and the choir soloist who resorts to all sorts of embellishments and mannerisms (sometimes falsely called art) to conceal a lack of culture and real feeling is not in the right place. The personality of the singer should be hidden, and an endeavor made to interpret and convey the idea contained in the hymn to the hearts and minds of those who listen.

I will mention a few of the words most commonly mispronounced in singing by those who would hardly speak them in the same way: The words late (often pronounced *la-et*), child (choil and chee-ilde), mercy (murcy), Shepherd (Shuppud), glory (glo-oo-ry and glary), King (Keeng), mine (mi-ene and moine), name (na-eeme), is (ees), etc. These are but a few of the long list. Experiment with the little words yes and no, and see if they do not sound like ye-us or ya-a-s, and no-oo. We draw out our vowel sounds so unnecessarily. It is not merely distinct enunciation that we should work for, but the best and most refined, and to that end it will be seen that we must change the shape of our vowels. Too much can hardly be said on this point. As an illustration of how to obtain the best pronunciation of a word, we will take the one that heads this list. The *la* should be taken with a smiling position of the lips, holding mouth and chin perfectly quiet, then quickly finishing with the consonant, making the word sound exactly as if spelled *lät*. To change position of the mouth until a syllable is finished, is to spoil the word. Take the word no. Prepare or round the lips as for whistling, and speak or sing the word quickly without allowing the lips to change even slightly, and notice the difference between a perfectly round *o* and a double one.

If we will only borrow from the Italian its perfect vowel sounds, as was said before, we need no longer complain that our language is unmusical. Our words will not have an affected sound, but will grow refined both in speaking and singing. When Mr. Max Heinrich sings "Lord God of Abraham" from "Elijah," and pronounces the last word *Ab-brah-hahm*, we can forgive him, remembering that the *a* would have just that sound in his language; but it is not in good taste for an English-speaking person to imitate him in that respect, as it should be our aim always to sing a word as it is correctly spoken in our own language.

This is always a safe rule to follow. Imitation of any one should be avoided, for even great singers sometimes err; but the greatest have always "dared to be true and simple." Let us remember that all true art is delicate and simple; and let us, church singers, strive for simplicity of style, for genuineness of feeling, and for an intelligent appreciation of our work, avoiding all mannerisms and embellishment.—The Outlook.

THE EMPEROR OF AUSTRIA AND HIS GRANDCHILDREN.

THE Emperor Franz Josef I., whose happy reign has lasted for nearly half a century, ascended the throne while still a youth, in the stormy times of the revolution. He passed through many dark days, but he displayed great perseverance and determination, devoting himself to the duties of his high position as chief officer of the state. This, however, has not made him forgetful of the joys and duties of a man of family. He is nowhere happier than when surrounded by his children and grandchildren, and, therefore, it is a satisfaction to see such a photograph as the one lately taken of the Emperor and his grandchildren. We pub-

The thanks of Congress were tendered to him for skill and heroic valor at Gettysburg. He became a corps commander in 1863 and was assigned to the command of the Army of the Tennessee in 1864. In the campaign of 1864 he was again wounded. He was appointed from the volunteers a brigadier general in the permanent establishment in 1864, and was promoted to be major general in 1886. He received the brevet of major general for gallant and meritorious services in the battle of Ezra Church, and during the campaign against Atlanta, Georgia. While commander of the Department of the Columbia, he led the troops in person, in 1877, in a campaign against the Nez Percés Indians, and, in 1878, against the Bannocks and Piutes. He was, later, superintendent of the United States Military Academy at West Point, and afterward in turn commander of the Department of the Platte, of the Division of the Pacific and of the Division of the Atlantic. He retires from active service as commander of the Department of the East.

Major General Howard's long, varied, and distinguished career has been characterized by marked ability in the command of troops and great gallantry in action; by unselfish patriotism and broad philanthropy. He has deserved the gratitude of his country-

THE EMPEROR OF AUSTRIA AND HIS GRANDCHILDREN.

lish a copy of this photograph, for which we are indebted to our worthy contemporary, Ueber Land und Meer.

RETIREMENT OF GENERAL HOWARD.

GENERAL HOWARD having reached the age of sixty-two is now retired from active service, such being the law. The Secretary of War in general orders announces the fact as follows:

"By direction of the President, the retirement from active service this day, Nov. 8, 1894, by operation of law, of Major General Oliver O. Howard, under the provisions of the act of June 30, 1882, is announced.

"General Howard entered the Military Academy in 1850, and was graduated therefrom among the honor men of his class in 1854. He was thereupon appointed in the ordnance department, and, after attaining the grade of first lieutenant, resigned his position in the army in June, 1861, upon the outbreak of the late war, to accept a commission as colonel of the 3d Maine Volunteers. He was promoted to be brigadier general of volunteers in September, 1861, and major general of volunteers in 1862. He served in the field continuously during the war, and was engaged in thirty-five combats and actions and many skirmishes. At Fair Oaks, Virginia, he lost his right arm. For distinguished bravery in this action he has received a medal of honor.

men and the rest provided by law after the close of a long and faithful military service."

A NEW TREATMENT FOR ERYSIPELAS.

By W. V. GAGE, M.D., McCook, Neb.

AT the risk of being assailed after the publication of this article with numerous letters disputing my claim to originality in the method of handling the above named disease, I beg leave to call your attention to the treatment of erysipelas with the wet carbolic acid dressing. The treatment, as far as I know, is original; but I am more than willing that you should demonstrate to me that it is in no way new. Every physician has often experienced a conflict with erysipelas, and has probably many times arrived at the conclusion that his local applications did harm, not much good or were absolutely inert. Strumpel says: "The chief indications for treatment will be to check the unceasing advance of the disease; but, unfortunately, the means recommended for this purpose too often fail."

Iodine painted over the healthy skin at the border of the inflammation seldom arrests the progress of the local manifestation; and the old fashioned method with the nitrate of silver pencil is certainly as barren of results. In regard to internal medication, iron has, no doubt, been exhibited more than any other one medi-