

none of the Indians ; and it is still believed in Peru, among *las barbaras* in the upper Amazonas, that the descendants of this Inca still live. The author has found the Lost Inca : the Last Inca is not yet.

— Col. H. G. Prout (Baroud Bey), in his article on Emin's province in the November *Scribner*, says, "Emin's uncertain power in a savage land is all that remains of the late Khedive's Central African Empire. One day, in Khartoum, Gordon asked me what I thought would be the future of the Equatorial Provinces. I said, 'The power will gradually return to the Arabs, the negroes will kill their friends and tormentors together, and the good old times of war and famine will come back.' I am still of that opinion. Unless the enlightenment of Europe can control the upper Nile country, either through the Soudan or from the south, barbarism will control it. By control I mean physical control, and that must be directed by some one better than the Turk, the Arab, or the Circassian." Dr. James E. Pilcher, captain Medical Department, U.S.A., will describe in the same number the organization and appliances of the modern Sanitary Corps, which aims to relieve and care for the sick and wounded in the time of battle and in peace. The abundant illustrations of this article have been made from photographs of the corps actually at practice-work, and show very clearly the methods, which are of equal interest to all those who are members of the many societies for First Aid to the Injured, and the National Guard, which has adopted this system. In view of the congress of representatives of maritime nations in Washington, Professor J. Russell Soley's article will be of especial interest. He shows how certain principles of international law (which Great Britain has mainly been instrumental in establishing) will re-act to the disadvantage, and even great peril, of that nation in the event of another Anglo-continental war. He also discusses the effect which our navigation laws will have in preventing us to profit from the redistribution of the carrying trade which would ensue. Goethe's house at Weimar, from which the public have been excluded rigidly until within a year, will be fully described by Oscar Browning. The many illustrations are from the first photographs taken since the house was thrown open, and represent the rooms as Goethe left them. Dr. M. Allen Starr will describe the effects of electricity upon the human body. This subject is of special importance, owing to the frequent reports of accidents due to contact with electric wires, to the recent adoption of electricity as a means for executing criminals, and to the extravagant claims of the curative powers of electricity in diseases. Dr. Starr will draw the line very sharply between the legitimate use of electricity and quackery.

— The November issue of *The Chautauquan* presents the following table of contents : "The Burial of Rome," by Rodolfo Lanciani, LL.D. ; "The Politics which made and unmade Rome," by President C. K. Adams, LL.D. ; "The Life of the Romans," by Principal James Donaldson, LL.D. ; "The Story of Sejanus," by George Parsons Lathrop ; "Map Quiz" on *The Chautauquan* Map Series ; "The Cause of Geographic Conditions," by Professor N. S. Shaler ; "Mental Philosophy," by John Habberton ; "The Uses of Mathematics," by Professor A. S. Hardy, Ph.D. ; "Traits of Human Nature," by the Rev. J. M. Buckley, D.D. ; "What shall the State do for me ?" by Thomas B. Preston ; "English Politics and Society," by J. Ranken Towse ; "The Story of No Man's Land," by John R. Spears ; "Maria Mitchell," by Harriet Prescott Spofford ; "The French Constitution," by Albert Shaw, Ph.D. ; "Electricity at the Paris Exposition," by Eugene-Melchior de Vogue ; "In Armenian Villages," by Harriet G. Powers ; "The Modern Thermometer," by Ernest Ingersoll.

— D. C. Heath & Co. will publish this month Lessing's "Minne von Barnhelm," a comedy in five acts, edited with notes and an extended introduction by Sylvester Primer. The play is highly interesting, since the style is Lessing's best, and the dramatic effects well sustained. The study of Lessing as a dramatist and a critic is essential to a comprehensive knowledge of Germany's great classic period : hence the importance of this masterpiece to students of German. In the introduction the editor gives the progress of German literature from the time of Opitz to Lessing, the condition of the German stage, and something of the intellectual development of the people during this period. A discriminating biogra-

phy of Lessing and a "critical analysis" of the play give a full analysis of the characters and an account of the historical and other sources, while its national importance as being truly German is well brought out.

INDUSTRIAL NOTES.

The Bower-Barff Rustless Iron Process.

ABOUT eighteen months ago, Mr. Henry M. Howe, the eminent metallurgist whose work on steel is now being published in *The Engineering and Mining Journal*, applied to several of the licensees of the Bower-Barff Rustless Iron Company for samples of cast and wrought iron which had been treated by the processes controlled by this company, for the purpose of testing their resistance to oxidation. Mr. Howe, who is now in Paris acting as United States iron and steel commissioner at the exposition, writes to the company as follows in relation to these experiments :—

"I have just summed up the results of my experiments in the matter of protective coatings for iron. I enclose table of results, which you may use if you want, and as you want. The Bower-Barff wins easily, beating even tinned and galvanized badly. The galvanizing was done by the Rhode Island Tool Company, whose work, I understand, is of the very highest ; and they were informed that the work was for a test trial. The conditions were rigidly

Loss of Weight of Wrought and Cast Iron with Different Protective Coatings and under Different Conditions, in Pounds per Square Foot of Surface per Annum.

Sheet Iron (No. 23 Gauge, Black).

Protective Coatings.	Exposed to the Weather Inland.		Immersed in	
	Canada.	New York State.	Fresh Water.	Sewage.
Bower-Barffed...	.0	Gain .000.3	.006.7	.003.6
Tinned... ..	Gain .002.0	.000.1	.019.4	.007.1
Nickel-plated...	.0	.000.5	.050.4	.003.1
Galvanized.....	Gain .000.4045.9	.080.5
Barffed.....	.001.0	.003.1	.083.9	.117.0
Black ; i.e., unprotected....	.001.3	.022.6	.137.0	.169.0
Copper-plated...	.000.2	.005.0	.179.0	.182.0

Cast Iron.

Protective Coatings.	Exposed to the Weather Inland.		Immersed in	
	Canada.	New York State.	Fresh Water.	Sewage.
Bower-Barffed...	Gain .004.0	Gain .003.1	Gain .005.5	.001.4
Bower-Barffed and paraffined	.000.6	.001.9	.000.2	.008.4
Galvanized.....	.0	.0	.049.1	.061.0
Tinned.....	Gain .003.1	.065.5	.061.0
Nickel-plated..	Gain .003.4	.002.5	.136.7	.083.3
Copper-plated...	" .004.0	.005.0	.150.8	.119.2
Black ; i.e., unprotected ...	" .006.3	.012.0	.148.3	.272.4

identical. It is a fair victory. I shall publish the results as an appendix to my "Metallurgy of Steel," and perhaps more fully thereafter. Immersed in Chestnut Hill Reservoir, Boston, for a year, the Bower-Barffed wrought-iron plate was hardly discolored, except where held by the crate. Another immersed in the Boston main-sewer sewage for a year retained its skin, and was only slightly pitted, while most of the tin was removed from a tinned iron sheet beside it. If you publish these, credit R. W. Lodge with doing the work with me. He put in a good deal of hard work and deserves credit."