

does not exist, and, therefore, are steps towards the solution of the hitherto so-called Steiner problem (*a*).

The school-girl problem is merely an example which originated in the development of this paper on combinations, and Kirkman justly complained of the almost total eclipse of this paper in the wide popular interest aroused by the school-girl problem. The eclipse appears to have continued up to the present day, since no mention is made of this Kirkman paper by Steiner, Reiss, Netto, or by any of the recent writers on triad systems.

VASSAR COLLEGE,
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PIERRE LAURENT WANTZEL.

BY PROFESSOR FLORIAN CAJORI.

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EVERY one knows that one of the noted proofs of the impossibility of an algebraic solution of the general quintic equation is due to Wantzel. Nevertheless histories of mathematics and biographical dictionaries are silent regarding his life. The eleven papers listed in Poggendorff's Handwörterbuch as due to "Pierre Laurent Wantzell" do not include the proof in question, and a query is raised in a footnote regarding another "Wanzell"; but nowhere does Poggendorff refer to a "Wantzel." Text-books on algebra and the theory of equations do not give Wantzel's full name. The reader is thus left without positive information as to the author of "Wantzel's proof." His name suggests German nationality, as does the name of "Mannheim," of slide-rule fame. Yet both these men were born in Paris and passed their lives at the Polytechnic School there.* Born in 1814, Wantzel died prematurely in 1848. He is the "Pierre Laurent Wantzell" of Poggendorff but in his published articles his name is always spelled

* On the life of Wantzel, see Barré de Saint-Venant in *Nouvelles Annales de Mathématiques* (Terquem et Gerono), vol. 7 (1848), pp. 321-331; A. de Lapparent in *Ecole polytechnique, Livre du Centenaire, 1794-1894*, vol. I., Paris, 1895, pp. 133-135, see also pp. 63-65, 190; Gaston Pinet's *Ecrivains et Penseurs Polytechniciens*, 2e éd., Paris, 1902, p. 20; Charles Sturm in *Comptes rendus hebdomadaires des Séances de l'Académie des Sciences*, Paris, vol. 28 (1849), pp. 66, 67.