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\*\*\* START OF THE PROJECT GUTENBERG EBOOK MILITARY SCHOOLS AND COURSES OF INSTRUCTION IN THE SCIENCE AND ART OF WAR, \*\*\*

The second and longer Table of Contents was printed at the end of the volume. There is a [supplementary table of contents](#) partway through the France section, covering only the Polytechnic. The relationship between the Tables of Contents (all) and the printed book is casual at best; information may have been accurate for the first edition. Except in the case of apparent typographical error, discrepancies were left as printed.

The section on Switzerland (Part IX) was printed after the section on Great Britain (Part VIII). For this e-text it has been grouped with the smaller countries (Parts III through VIII).

[Introduction to Revised Edition](#)  
[Contents \(2 pages\)](#)  
[Introduction](#)  
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Typographical errors are shown in the text with [mouse-hover popups](#). Errors are listed again at the end of each section.

Military Schools

AND

COURSES OF INSTRUCTION

IN THE

SCIENCE AND ART OF WAR,

IN

FRANCE, PRUSSIA, AUSTRIA, RUSSIA, SWEDEN, SWITZERLAND,

DRAWN FROM RECENT OFFICIAL REPORTS AND  
DOCUMENTS.

By HENRY BARNARD, LL.D.

REVISED EDITION.

NEW YORK:  
PUBLISHED BY E. STEIGER,  
22 & 24 FRANKFORT STREET.  
1872.

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## REVISED EDITION.

THE first edition of *Military Schools in France and Prussia* was issued in 1862, as a number of the *American Journal of Education*; and subsequently in the same year this portion was printed as Part I. of a comprehensive survey of the whole field of Instruction in the Science and Art of War in different countries. The circumstances under which the publication was begun, are set forth in the Preface to the imperfect edition of 1862. Now that the survey in the serial chapters of the *Journal* is as complete as the material at the command of the Editor, and the space which he can give to this special subject enable him to make it, the several chapters have been revised and brought together in a single volume, to present the actual condition of this important department of national education in the principal states of Europe, as well as in our own country.

It is due to the late Col. Samuel Colt, the inventor of the Colt Revolver, and the founder of the Colt Patent Fire-Arms Factory—two enterprises which have changed the character and the mode of constructing fire-arms in every country—to state that the information contained in the first edition of this Treatise, was collected and prepared at his request, to assist him in maturing the plan of a School of Mechanical Engineering, which he proposed to establish on his estate at Hartford, and on which, after the breaking out of the War of Secession, he decided to engraft both military drill, and military history, and to give that scientific instruction which every graduate of our national Military and Naval Academies ought to possess. Soon after Col. Colt's death (Jan. 10, 1862), Mrs. Elizabeth Jarvis Colt, learning what had been done in the direction of her husband's wishes, authorized the use which has been made, of the material already collected, in the preparation of this treatise, and of the volume already published on *Technical Schools in different countries*, and of any more which might be collected and prepared at her expense, to illustrate any department of his plan of a scientific school at Hartford.

HENRY BARNARD.

HARTFORD, CONN., March, 1872.

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AN account of the Military and Naval Schools of different countries, with special reference to the extension and improvement, among ourselves, of similar institutions and agencies, both national and state, for the special training of officers and men for the exigencies of war, was promised by the Editor in his original announcement of "*The American Journal and Library of Education.*" Believing that the best preparation for professional and official service of any kind, either of peace or war, is to be made in the thorough culture of all manly qualities, and that all special schools should rest on the basis, and rise naturally out of a general system of education for the whole community, we devoted our first efforts to the fullest exposition of the best principles and methods of elementary instruction, and to improvements in the organization, teaching, and discipline of schools, of different grades, but all designed to give a proportionate culture of all the faculties. We have from time to time introduced the subject of Scientific Schools—or of institutions in which the principles of mathematics, mechanics, physics, and chemistry are thoroughly mastered, and their applications to the more common as well as higher arts of construction, machinery, manufactures, and agriculture, are experimentally taught. In this kind of instruction must we look for the special training of our engineers, both civil and military; and schools of this kind established in every state, should turn out every year a certain number of candidates of suitable age to compete freely in open examinations for admission to a great National School, like the Polytechnic at Paris, or the purely scientific course of the Military Academy at West Point, and then after two years of severe study, and having been found qualified by repeated examinations, semi-annual and final, by a board composed, not of honorary visitors, but of experts in each science, should pass to schools of application or training for the special service for which they have a natural aptitude and particular preparation.

The terrible realities of our present situation as a people—the fact that within a period of twelve months a million of able bodied men have been summoned to arms from the peaceful occupations of the office, the shop, and the field, and are now in hostile array, or in actual conflict, within the limits of the United States, and the no less alarming aspect of the future, arising not only from the delicate position of our own relations with foreign governments, but from the armed interference of the great Military Powers of Europe in the internal affairs of a neighboring republic, have brought up the subject of MILITARY SCHOOLS, AND MILITARY EDUCATION, for consideration and action with an urgency which admits of no delay. Something must and will be done at once. And in reply to numerous letters for information and suggestions, and to enable those who are urging the National, State or Municipal authorities to provide additional facilities for military instruction, or who may propose to establish schools, or engraft on existing schools exercises for this purpose,—to profit by the experience of our own and other countries, in the work of training officers and men for the ART OF WAR, we shall bring together into a single volume, "*Papers on Military Education,*" which it was our intention to publish in successive numbers of the NEW SERIES of the "*American Journal of Education.*"

This volume, as will be seen by the Contents, presents a most comprehensive survey of the Institutions and Courses of Instruction, which the chief nations of Europe have matured from their own experience, and the study of each other's improvements, to perfect their officers for every department of military and naval service which the exigencies of modern warfare require, and at the same time, furnishes valuable hints for the final organization of our entire military establishments, both national and state.

We shall publish in the Part devoted to the United States, an account of the Military Academy at West Point, the Naval Academy at Newport, and other Institutions and Agencies,—State, Associated, and Individual, for Military instruction, now in existence in this country, together with several communications and suggestions which we have received in advocacy of Military Drill and Gymnastic exercises in Schools. We do not object to a moderate amount of this Drill and these exercises, properly regulated as to time and amount, and given by competent teachers. There is much of great practical value in the military element, in respect both to physical training, and moral and mental discipline. But we do not believe in the physical degeneracy, or the lack of military aptitude and spirit of the American people—at least to the extent asserted to exist by many writers on the subject. And we do not believe that any amount of juvenile military drill, any organization of cadet-corps, any amount of rifle or musket practice, or target shooting, valuable as these are, will be an adequate substitute for the severe scientific study, or the special training which a well organized system of military institutions provides for the training of officers both for the army and navy.

Our old and abiding reliance for industrial progress, social well being, internal peace, and security from foreign aggression rests on:—

I. The better Elementary education of the whole people—through better homes and better schools—through homes, such as Christianity establishes and recognizes, and schools, common because cheap enough for the poorest, and good enough for the best,—made better by a more intelligent public conviction of their necessity, and a more general knowledge among adults of the most direct modes of effecting their improvement, and by the joint action of more intelligent parents, better qualified teachers, and more faithful school officers. This first great point must be secured by the more vigorous prosecution of all the agencies and measures now employed for the advancement of public schools, and a more general appreciation of the enormous amount of stolid ignorance and half education, or mis-education which now prevails, even in states where

the most attention has been paid to popular education.

II. The establishment of a System of Public High Schools in every state—far more complete than exists at this time, based on the system of Elementary Schools, into which candidates shall gain admission only after having been found qualified in certain studies by an open examination. The studies of this class of schools should be preparatory both in literature and science for what is now the College Course, and for what is now also the requirements in mathematics in the Second Year’s Course at the Military Academy at West Point.

III. A system of Special Schools, either in connection with existing Colleges, or on an independent basis, in which the principles of science shall be taught with special reference to their applications to the Arts of Peace and War. Foremost in this class should stand a National School of Science, organized and conducted on the plan of the Polytechnic School of France, and preparatory to Special Military and Naval Schools.

IV. The Appointment to vacancies, in all higher Public Schools, either among teachers or pupils, and in all departments of the Public Service by Open Competitive Examination.

HENRY BARNARD.

HARTFORD, CONN., 1862.

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