

**HOW TO BECOME A
SUCCESSFUL ENGINEER: BEING
HINTS TO YOUTHS INTENDING
TO ADOPT THE PROFESSION**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649456314

How to Become a Successful Engineer: Being Hints to Youths Intending to Adopt the Profession
by Bernard Stuart

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

BERNARD STUART

**HOW TO BECOME A
SUCCESSFUL ENGINEER: BEING
HINTS TO YOUTHS INTENDING
TO ADOPT THE PROFESSION**

3477 HOW TO BECOME
A SUCCESSFUL ENGINEER:

BEING

HINTS TO YOUTHS INTENDING TO ADOPT
THE PROFESSION.

BY
BERNARD STUART,
ENGINEER.

+

FOURTH EDITION.

EDINBURGH:
WILLIAM P. NIMMO.
1869.

THE NEW YORK
PUBLIC LIBRARY
788343 A
ASTOR, LENOX AND
TILDEN FOUNDATIONS
R 1935 L

EDINBURGH:
PRINTED BY HENDERSON AND M'FARLANE,
ST JAMES' SQUARE.

PREFACE.

THE education of a youth, to enable him to take his place among men in after life, is a matter of the utmost importance; and upon his undergoing such an education under a proper system when he is young, depends, to a great extent, the formation of his character, and, consequently, his future success in life. The system of commercial education is pretty well established, and, therefore, needs no comment. A scientific education, however, designed to fit its recipient for a professional life, can only be best imparted by a certain system or course of instruction; in short, the youth or student must have the right studies peculiar to the profession placed before him at the right time, so as to ensure a maximum and steady progress. This is especially the case in the education of students in engineering science. There have been many self-made engineers, and, although not possess-

ing what may be called a Commercial, or English education, yet they have all been, in the science of their profession, educated men. It is true that many men have, without the aid of education of almost any sort when young, risen in maturer years to the greatest proficiency as engineers; but these have possessed an intuitive and strong love for their profession, and have only acquired that degree of proficiency by a system of self-directed education under many and great disadvantages. As every man does not possess such rare qualifications as those just mentioned, the experience of society shows that, to enable a man to become successful in his business, a knowledge of such must be acquired, and that as early in life as possible, this knowledge being imparted rather than self-directed. In the engineering profession the system of education is very varied, and is frequently imparted by illiterate and incompetent men; and there being always two ways of attempting to accomplish an object, a right and a wrong way, the natural consequence is that as many of these systems are wrong ones as others are right; so that many young men, after having gone through the routine of their engineering education, have just acquired so much knowledge as to enable them to perceive their ignorance, and that they have been mis-

guided in their way to the proper acquisition of engineering knowledge. Take, for example, the case of a young man who has completed his course of a sound English education, and who has resolved, with the sanction and approval of his parents or guardians, that he will follow the profession of an engineer. A premium is accordingly paid to secure his admission to the works of a mechanical engineer, or, it may be, into the office of a civil engineer. He is so far privileged, and, as a pupil, the means of acquiring information are placed within his reach, or he gets in the shop the best of work; but as everything else depends on himself, it not unfrequently happens that, instead of being turned out an educated engineer, it is found that he has undervalued his profession and has been wasting his time, all of which might have been prevented by a proper system of discipline and education.

Enough, probably, has been said to show the importance of a good system; and this little volume, *therefore, is designed with a view, as far as possible, to point out what the author considers the proper course of instruction for those aspiring to become professional engineers.* Technicalities have, as far as possible, been avoided, and the style of information has been so far reduced to suit the intellectual capacity of

a youth who may be supposed capable of considering what profession it will be expedient for him to follow. At the same time, the author recommends it to the consideration of parents and guardians who may decide for those under their charge.