

**LATHE-WORK: A PRACTICAL  
TREATISE ON THE TOOLS,  
APPLIANCES, AND PROCESSES  
EMPLOYED IN THE ART OF  
TURNING**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649625703

Lathe-Work: A Practical Treatise on the Tools, Appliances, and Processes Employed in the Art of Turning by Paul N. Hasluck

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](http://www.triestepublishing.com)

**PAUL N. HASLUCK**

**LATHE-WORK: A PRACTICAL  
TREATISE ON THE TOOLS,  
APPLIANCES, AND PROCESSES  
EMPLOYED IN THE  
ART OF TURNING**



LATHE-WORK.

# LATHE-WORK

A PRACTICAL TREATISE

ON

THE TOOLS, APPLIANCES, AND PROCESSES EMPLOYED IN  
THE ART OF TURNING

INCLUDING

HAND-TURNING, BORING AND DRILLING, THE USE OF SLIDE-  
RESTS AND OVERHEAD GEAR, SCREW-CUTTING BY HAND  
AND SELF-ACTING MOTION, WHEEL-CUTTING,  
ETC., ETC.

BY

PAUL N. HASLUCK

With Numerous Illustrations Drawn by the Author



LONDON  
CROSBY LOCKWOOD AND CO.  
7, STATIONERS' HALL COURT, LUDGATE HILL  
1881

[All rights reserved]

186 f. 103.



## PREFACE.

---

WHEN first I occupied myself in mechanical manipulations and lathe-work engrossed my attention, the want of a handy guide-book, treating the subject in a practical manner, was greatly felt. Though much has been done since then towards placing technical education within the reach of all, yet I recently found, in my official capacity as editor of a journal largely devoted to mechanics, that beginners at the lathe still continue to seek such a book, and I have therefore prepared the following pages.

In the form of desultory articles, written by me, much of the information has already appeared in various technical papers. The whole has been re-written for publication in book form, and it has been my endeavour to bring within the available space the information most useful to the beginner at lathe-work.

Though I make no claim to special literary merit, yet I believe that the instructions are made clear without verbiage; and as I write from personal experience, the book may be accepted as



trustworthy and practical by those who study its contents.

The illustrations have been engraved from my own drawings, and show, at a glance, constructive details that could not be explained in letterpress. The drawings are from the objects they represent, and will convey much useful information, and working drawings of the full size can be made from the woodcuts; the measurements can be filled in from the text.

P. N. HASLUCK.

LONDON, *February*, 1881.

# CONTENTS.

## CHAPTER I.

### THE ART OF TURNING.

	PAGE
Its importance and antiquity—Primitive methods of turning— The potter's wheel—Early forms of the lathe—Its develop- ment—Lathes on standards—Fly-wheels—Literature of the art—Modern lathes . . . . .	1

## CHAPTER II.

### THE FOOT LATHE DESCRIBED.

Its various forms and sizes—Watchmakers' lathes—Bench lathes —Iron beds of various forms—Back-gearing—Slow motion— Screw-cutting motion—The lathe best suited for general pur- poses—The framework, bed, and fly-wheel—Mandrel headstock —Back-centre headstock—The hand-rest and collar-plate— Testing a lathe . . . . .	8
--	---

## CHAPTER III.

### HAND TURNING.

First principles of the art, commencing to practise—Wood turn- ing, the gouge and the chisel—The mode of their application to the cylinder and surface—Easily made objects for beginners —Making a plain wooden box—Metal turning, the graver and triangular tool, and their use—Finishing tools, round-nose tools, &c. . . . .	29
--	----

## CHAPTER IV.

## SCREW-CUTTING BY HAND.

	PAGE
Striking the thread with outside and inside comb-screw tools— Originating a thread—The method of cutting the thread in a lathe-chuck minutely described . . . . .	45

## CHAPTER V.

## BORING AND DRILLING.

Drills, their correct form and uses—How to grind them—Half- round bits—Pin-drills—Bars with movable cutters—Rose cutters and rose bits—Lubrication necessary in boring . . . . .	51
--	----

## CHAPTER VI.

## MOUNTING WORK FOR TURNING.

Work between centres—Method of centring—Necessity of pro- perly preparing the centres—Chucking objects of various forms—False centres—The collar-plate—Chucking on the face-chuck . . . . .	60
--	----

## CHAPTER VII.

## FITTING CHUCKS TO THE LATHE-NOSE.

Minute details of the process—Various threads used for lath- noses—Making taps, &c., for fitting chucks—How the thread should be formed—A truly cut thread necessary on the nose . . . . .	70
--	----

## CHAPTER VIII.

## VARIOUS USEFUL CHUCKS DESCRIBED.

The point-chuck—The prong-chuck—Different forms of drill- chucks—Taperscrew-chucks—Face-chucks—Cup-chucks with three and four screws—Die-chucks with single pairs and movable dies—The four-jaw face-chuck . . . . .	88
---	----