

**JIG AND FIXTURE DESIGN, A TREATISE
COVERING THE PRINCIPLES OF JIG AND
FIXTURE DESIGN, THE IMPORTANT
CONSTRUCTIONAL DETAILS, AND MANY
DIFFERENT TYPES OF
WORK-HOLDING DEVICES USED IN
INTERCHANGEABLE MANUFACTURE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649618347

Jig and Fixture Design, a Treatise Covering the Principles of Jig and Fixture Design, the Important Constructional Details, and Many Different Types of Work-Holding Devices Used in Interchangeable Manufacture by Franklin D. Jones

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Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

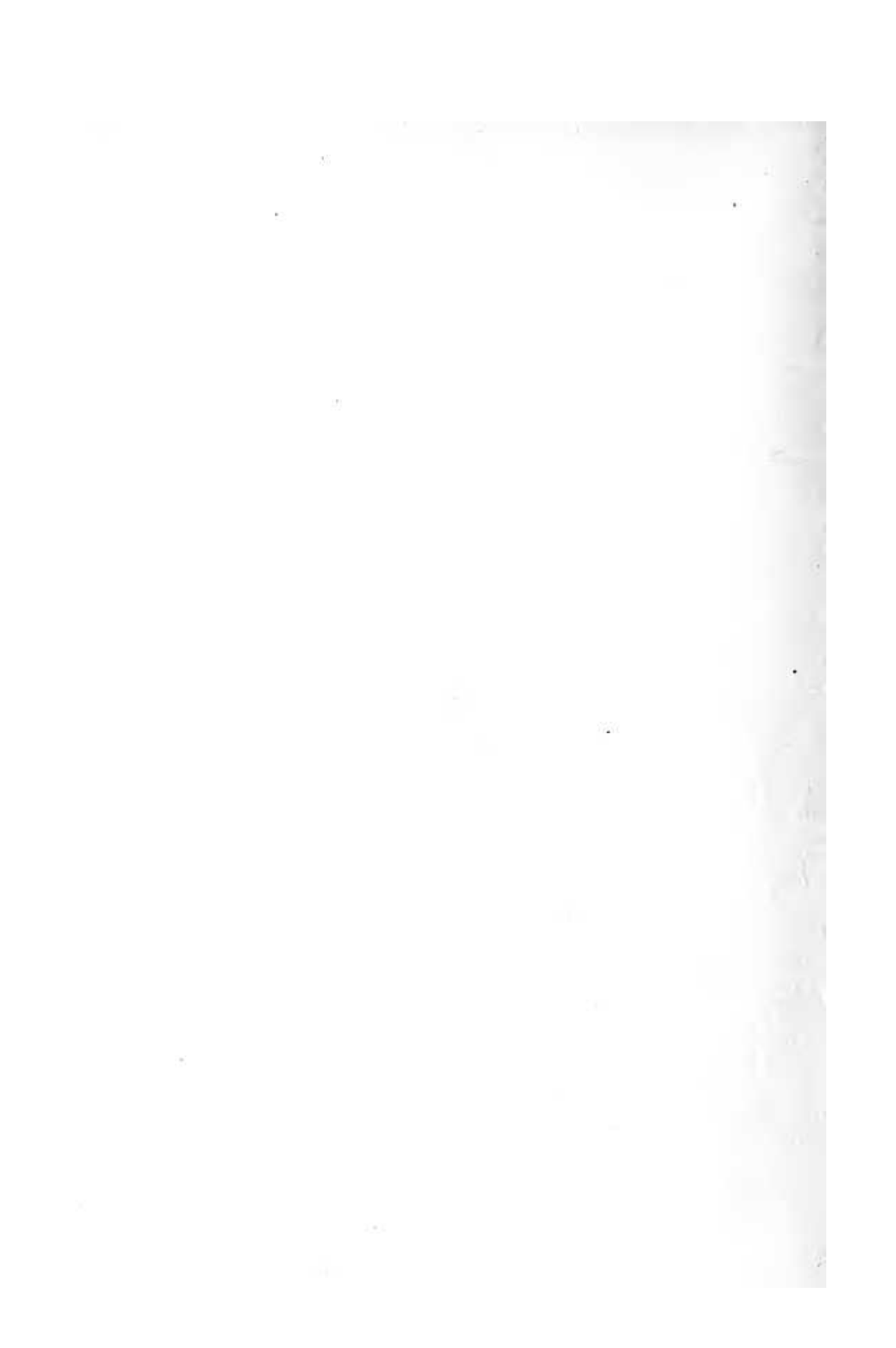
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FRANKLIN D. JONES

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"THREAD-CUTTING METHODS," ETC.

FIRST EDITION

174267.
5-10-22.

NEW YORK

THE INDUSTRIAL PRESS

LONDON: THE MACHINERY PUBLISHING CO., LTD.

1920

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THE INDUSTRIAL PRESS
NEW YORK

COMPOSITION AND ELECTROTYPING BY THE PLIMPTON PRESS, NORWOOD, MASS., U. S. A.

PREFACE

The development of machine tools has been accompanied by a corresponding development of auxiliary equipment for increasing the quantity and improving the quality of the products of these machines. Whenever duplicate parts require some operation such as drilling, planing, or milling, the selection of a suitable type of machine is often followed by the design of whatever special tools or attachments are needed to adapt the machine to the operation required. The tool-guiding and work-holding jigs and fixtures which are now used in practically all machine shops represent the most important class of special equipment, and this book deals exclusively with their design and construction.

As most jigs are used for drilling operations, a book was previously published entitled "Drilling Practice and Jig Design," covering different types of drilling machines and their use, the design of drill jigs, and, to some extent, the design of fixtures such, for example, as are used on milling machines. While the subjects of drilling and jig design are closely allied, it is no longer possible to cover them both in a single volume, owing to the extensive changes in drilling practice and the increasing use of jigs and fixtures of various types on different classes of machine tools. Therefore, the book referred to has been replaced by two volumes, of which this is one. The other book, "Modern Drilling Practice," is already well known to many designers, shop foremen, and machinists interested in the latest types of drilling machines and their use.

This new book, "Jig and Fixture Design," contains that part of the volume on "Drilling Practice and Jig Design" which dealt with jigs and fixtures. This material was used because it is a treatise on the principles of jig and fixture design which contains information that is indispensable in a book of this

kind. These original chapters which explain the general procedure in designing jigs and fixtures and how work should be located, clamped, etc., have been supplemented by a large amount of new matter, thus making the present book unusually complete. A great variety of jig and fixture designs have been described and illustrated in order to show just how the principles and important details referred to in the forepart of the book are applied under many different conditions and to jigs and fixtures used on various types of machine tools.

Most of the designs illustrated in this book have been sent to MACHINERY from men in the machine-building field, because the designs were considered unusual and worth placing on record. While it would not be possible to give credit to each individual contributor, we are indebted to all who have assisted indirectly in preparing this treatise, and especially to Einar Morin and Albert A. Dowd, recognized tool experts and production engineers, who have supplied valuable material for several of the chapters on jig design.

THE EDITOR.

New York, *October, 1920.*

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