SKEW ARCHES: ADVANTAGES AND DISADVANTAGES OF DIFFERENT METHODS OF CONSTRUCTION

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649531516

Skew Arches: Advantages and Disadvantages of Different Methods of Construction by E. W. Hyde

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

E. W. HYDE

SKEW ARCHES: ADVANTAGES AND DISADVANTAGES OF DIFFERENT METHODS OF CONSTRUCTION



SKEW ARCHES.

ADVANTAGES AND DISADVANTAGES

DIFFERENT METHODS

OF CONSTRUCTION.

E. W. HYDE, C. E.



NEW YORK:

D. VAN NOSTRAND CO., PUBLISHERS, 23 Murray and 27 Warren Strems. 1899. The author was led to make the investigations contained in this little treatise by a desire to satisfy his own mind as to the relative advantages of several different methods which have been employed in the construction of Skew Arches.

The two important points of comparison that naturally suggest themselves to the investigator are:

1st. Relative security;

2d. Relative facility of construction.

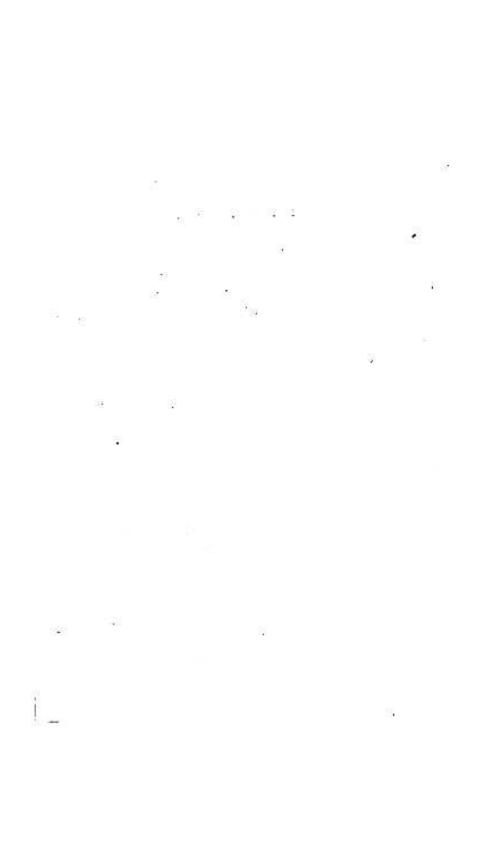
A discussion and comparison of three modes of construction, with special reference to these points, will be found in the following pages, together with brief descriptions of the manner of making the necessary draughts, patterns, templets, etc.

The paper first appeared in Van Nos-TRAND'S ENGINEERING MAGAZINE, for which it was written.

E. W. HYDE.

41

313266



PREFACE

TO SECOND EDITION.

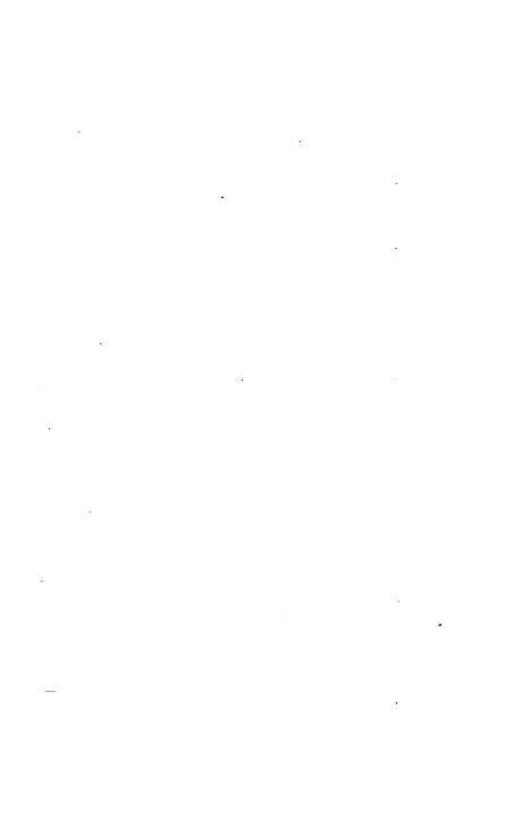
As the demand for this little treatise had exhausted the first edition, a new one was plainly suggested.

Although strictly technical in its character, and belonging to the less frequented field of practical engineering, it manifestly supplied a want.

The present issue, except for a few typographical corrections is a literal reprint, of the first edition.

G. W. P.

Jan. 1900.



SKEW ARCHES.

I propose in this paper to discuss to some extent three methods which have been employed in the construction of oblique or skew arches, and to make a comparison of their relative security, facility of construction, etc.

The three methods will be designated as.

1st. The Helicoidal method.

2d. The Logarithmic method.

3d. The "Corne de Vache" or Cow'shorn method.

The first two names are derived from the nature of the coursing and heading, joint surfaces and their intersections with the soffit, and the third from the soffit . itself, which is a warped surface that has been thus named. They will be considered in the order given above. The following abbreviations will be used throughout the paper:

C j c, for coursing joint curve, or intersection of coursing joint with soffit.

H j c, for heading joint curve.

C j s, for coursing joint surface.

H j s, for heading joint surface.

H P, for the horizontal plane of projection.

V P, for the vertical plane of projection.

P F, for the plane of the face of the arch.

Ex. s, for the extradosal or outer surface of the arch.

THE RELICOIDAL METHOD.

In this method the C j s's and H j s's are both warped helicoids, and of course their intersections with the soffit helices.

Let C D D, C, be the projection of the soffit on the H P which coincides with the springing plane of the arch, and D' V C, is a semicircle whose radius will be designated by r.

И.