

**DANGEROUS
STRUCTURES: A
HANDBOOK FOR
PRACTICAL MEN, PP. 4-84**

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Dangerous Structures: A Handbook for Practical Men, pp. 4-84 by George H. Blagrove

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GEORGE H. BLAGROVE

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DANGEROUS
STRUCTURES:

A Handbook for Practical Men.

BY

GEORGE H. BLAGROVE,

AUTHOR OF 'SHORING AND ITS APPLICATION,' ETC.

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PREFACE.

IN the present volume the Author's object has been to deal with some of those awkward problems in building which demand prompt solution, to suggest ready means for getting over difficulties which frequently occur in practice, and to supply data from which efficient and at the same time economical remedies may be designed to counteract evils arising from structural defects. To this end, the results of some practical experience have been summed up and presented to the reader in a concise form, together with so much theoretical demonstration as may not be too abstruse for ready reference. Tables showing the ultimate strength of such structural accessories as lintels, beams, struts, and posts, have been supplied. These tables have been expressly calculated for the purpose, and as they have been carefully checked, it is hoped that they will prove useful and reliable as memoranda for reference by surveyors, builders, and others, and will be conducive to economy of time.

The work comprised in the following pages was first published in 1890, as a series of articles in the *Building World*, when it met with so much appreciation that it was thought advisable to embody it in its present more permanent form. All the matter in the book has been thoroughly revised for republication, and an index has been provided.

The favourable reception accorded to the Author's handbook on 'Shoring and its Application,'* encourages him to hope that the present work will commend itself to the approval of practical men.

* London : Crosby Lockwood and Son, 1887.

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order to distribute the weight of the structure over a sufficient surface of soil? This depends upon the nature of the soil. Other things being equal, it may generally be inferred that a bottom at a considerable depth is less liable to be shifty than one of the same nature near the surface. It is made compact, and retained in position by the pressure of the superincumbent earth. The lateral pressure of the surrounding soil will also frequently have considerable influence upon the foundation of a building. If there is a large building sunk to a greater depth in the vicinity, this will help to retain the earth on that side, so that subsidences will be more likely to occur in other places. A building in the south of London, close to the river side, was found to have sunk considerably on the side farthest from the river, the side towards the river having scarcely sunk at all. This was made evident by the directions of the cracks in the walls and arches of the building. The explanation was that the embankment wall of the river retained the earth on that side, and prevented the foundations from subsiding. If the foundation is of clay, much will depend upon whether the stratum runs level or not. It has been noted that the Oxford and London blue clays slip at an inclination of one in ten, one in twelve being considered safe.

With regard to the bearing power of different soils, most of the soils in and about London will safely carry $2\frac{1}{2}$ tons per superficial foot; and for ordinary houses they are rarely required to carry more. The blue till or clay of Glasgow has been stated to be as firm and solid as a rock; and yet the Townsend chimney, at Port Dundas, which is built upon this soil, without any bed of concrete, does not weigh more than $3\frac{1}{2}$ tons per superficial foot upon the foundation. The compact