PLANK-ON-FRAME MODELS
AND
SCALE MASTING & RIGGING

VOLUME I

HAROLD A. UNDERHILL

PLANK-ON-FRAME MODELS

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Photo W. Robertson & Co., Gourock.

THE BRIGANTINE "LEON".
(302 Tons)
Built at Laurvig, Norway, in 1880.
Port of Registry, Porsgrund.

[*Frontispiece*

PLANK-ON-FRAME MODELS

AND

Scale Masting and Rigging

BY

HAROLD A. UNDERHILL

A.M.I.E.S.

VOLUME I

SCALE HULL CONSTRUCTION

With Plans and Sketches by the Author

GLASGOW

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INTRODUCTION

AS originally planned this book was to have been published as a single volume, but the ever rising cost of production made it evident that to do so would result in it becoming too costly, and it was therefore decided to divide it into two.

The text has been written round the building of one of my own models, the brigantine *Leon*, following it through from the use of plans to the final mounting on the base ready for the glass case. This particular model has however not been slavishly followed, for where subsequent work or previous models have proved better technique, this has been quoted, in fact alternative methods of making the various components are included throughout.

This model belongs to what for the want of a better term I will call the "scale construction" class, in which the internal timbering follows in close detail that of the prototype vessel, but other and more simple methods have also been described, and although the example chosen represents a ship of the smaller type, the same construction will apply to vessels such as full-rigged ships and barques.

I have always held that to produce a first class model it is not sufficient merely to have good plans of the vessel being built, they must be backed up by a good understanding of the full-size prototype of the class, and I have therefore described full-size practice alongside details of the model, which broadens the scope for the modelmaker to apply his own methods to achieve the same results, should he wish to do so.

The obvious point at which to divide this book into two volumes is at the end of the last chapter dealing with scale hull construction, carrying over to Volume II the mast and spar making, mast "ironwork" and all rigging, and this has been done. The main difficulty has been to decide what to do with those sections dealing with special light weight construction for sailing models and power craft, and the chapter on clinker construction. Clearly the best place would have been in the first volume, but to have done so would have defeated the whole object of dividing the book, since it would have placed 75 per cent. of the subject matter under one cover. For that reason these two sections have been carried over to Volume II. This is not an entirely satisfactory arrangement, since some of the basic principles, such as the use of plans and the setting out and run of the planking, apply

equally well to all methods of construction, from the glass case model with scale framing to the light weight sailer, and therefore Volume II will of necessity have to refer back to this for some items of detail.

The book has been written from the angle of the builder with limited tools and facilities, since my own model was built immediately after the war when I myself was in just that position, lacking both tools and workshop. However the construction used would have been just the same even though a fully equipped workshop had been available, but of course a good bench is always better than a poor table, and the wider the range of tools the greater the pleasure to be obtained from using them.

GLASGOW,
1958.

HAROLD A. UNDERHILL.

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