

# PRACTICAL SHEET METAL WORK AND DEMONSTRATED PATTERNS

A COMPREHENSIVE TREATISE IN SEVERAL VOLUMES ON  
SHOP AND OUTSIDE PRACTICE AND PATTERN DRAFTING

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## VOLUME XI AUTOMOBILES AND SHEET METAL BOATS

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BY  
WILLIAM NEUBECKER

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PLUMBER AND STEAM FITTER

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## PREFACE

THE following series of articles are devoted to the sheet metal features of automobile construction, and give an authoritative presentation of the state of the art to-day. Those already engaged in the work will find them interesting as giving an insight of the methods pursued in factories other than those with which they are identified. They will interest those not engaged in the work, in the opportunity they afford to learn the degree of development of what is relatively a new branch of the sheet metal industry. They will prove of value to still another branch of sheet metal workers; those operating jobbing shops where demands for repair parts or renewal parts may be made.

The articles aim to present short geometrical rules for developing the various patterns required in the sheet metal portion of the automobile's makeup. Care has been taken to show how and where flanges must be added to the patterns for nailing to the ash frame of the automobile, for riveting to the aluminum trimmings of the machine, for bolting to the channel of the chassis. Where necessary, photographs and sketches are used to make clear the various methods of constructing the joints and to indicate the way the joints are riveted and soldered. Sketches and descriptions of the various hand tools employed and the foot and power presses are also given. The figures illustrate the various sheet metal parts of the automobile, and give the proper name for each part, so that it is possible for the reader to intelligently follow the matter descriptive of that part. So far as possible the treatment of the articles involves the consideration of each part in the regular order in which it is taken up in the actual erection of the automobile in the shop.

The section on sheet metal boats is compiled from the columns of METAL WORKER and clearly illustrates the layout and construction of canoes, rowboats and launches.

WILLIAM NEUBECKER.

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