GES.

tion of truss, ms, and cross

Creek Valley,

of joinery.

of iron plate.

11. ver the Adda, iedral.

ie Aire, Yorkwork.

s. &c.

ailway bridge and plan.

ew of railing. he suspension constructed on

ridge over the , &c. tions of con-

rse sections of

ransverse do. ler frame, and ing bridge. st-iron swing

Cambridge, Company, (W. l plan, do. idge, idge, general of the valley

the mooring lan, ends of ches enlarged,

of do.

grams- of the

ion of a chain an principle.

In 1 vol. 4to., with 74 plates, extra cleth boards and lettered, price 21s., THE CARPENTER'S NEW GUIDE :

OR

THE BOOK OF LINES FOR CARPENTERS. GEOMETRICALLY EXPLAINED;

COMPRISING ALL THE ELEMENTARY PRINCIPLES ESSENTIAL FOR ACQUIRING A ENOWLEDGE OF THE THEORY AND PRACTICE OF CARPENTRY.

A NEW EDITION, FOUNDED ON THAT OF THE LATE PETER NICHOLSON'S STANDARD WORK ;

REVISED BY ARTHUR ASHPITEL, ARCHITECT, F.S.A., F.I.B.A.

TOGETHER WITH

PRACTICAL RULES ON DRAWING. By GEORGE PYNE, OF OXFORD, ARTIST.

The Work is divided in Three Divisions, with Seventy-four Illustrative Plates, as follows: ivision A. —Practical Geometry, and of Carpentry, explaining the principles in all its parts, by the late Peter Nicholson. (Pages 1 to 80—Plates 1 to 60.)
 Division C. —Practical Rules on Drawing, for the Operative Builder and Young Architecture I to 80. Division A .- Practical Geometry, and of

Student in Architecture. (Pages 1 to 80 -Plates 1 to 14.)

23

With 72 Engravings, new, improved, and extended edition, price 2l. 12s. 6d., extra large 4to, extra cloth boards and lettered,

THE PRACTICAL RAILWAY ENGINEER :

EXAMPLES OF THE MECHANICAL AND ENGINEERING OPERATIONS AND STRUCTURES COMBINED IN THE MAKING OF A RAILWAY.

By G. D. DEMPSEY, C.E. CONTENTS.

Section I .- Curves, gradients, gauge, and | Section IV. - Retaining walls, bridges, tunalopes. nels, &c.

Section II .- Survey and levels for a railway -Parliamentary plan and section-Limits of deviation-Setting out the line-Working plans and sections—Computing quan-titles—Opening the ground. Section III.—Earthworks, cuttings, em-

Division B .-- Practical Mathematics, Mensu-

bankments, and drains.

1. Cuttings.

2, 3, 4. Earthworks, excavating. 5. Ditto, embanking.

- 6. Ditto, waggons. 7. Drains under bridges.
- 8. Brick and stone culverts.
- 9. Paved crossings.

- 10. Railway bridges, diagram. 11, 12, 13, 14. Bridges, brick and stone.
- 15, 16. Ditto, iron. 17, 18, 19, 20, 21. Ditto, timber.

- 22. Centers for bridges. 23. 24, 25, 26, 27. "Pont de Montlouis." 25. "Pont du Cher."
- 29. Suspension bridge.
- Box-girder bridge.
 Box-girder bridge.
 Trestle bridge and Chepstow bridge.
 Details of Ohepstow bridge.
 Greosoting, screw-piling, &c.
 Permanent way and rails.

- 85. Ditto, chairs.

- Ditto, chairs.
 Ditto, fish-joints, &c.
 Ditto, fish-joint chairs.
 So, 39. Ditto, cast-iron sleepers, &c.
 Ditto, Stephenson's, Brunel's, Hemans's, Hemans Macneill's, and Dockray's.
- 41. Ditto, crossings.

Section V .- Permanent way and construc-

tion.

Section VI .- Stations, &c.

Section VII. — Rolling stock — Carriages, trucks, wheels, and axles—Brakes, and details—Locomotive engines and tenders. SectionVIII.-Signalsand electric telegraph.

LIST OF PLATES.

- 42. Ditto ditto, details.
- 43. Ditto, spring-crossings, &c. 44. Ditto, turn-table.
- 45, 46. Terminal station. 47, 48, 49. Stations.
- 50. Goods stations.
- 51. Polygonal engine-house.
- 52. Engine-house.
- Ditto, (B.) Details of pumps.
 Ditto, (B.) Details of orgines.
 Ditto, (C.) Details of orgines.
 Ditto, (D.) Cranes.
 Hoisting machinery.
 Ditto, details.
 Transming platform

- 59. Traversing platform.
- 60. Ditto, details.
 61. Station-roof at King's Cross.

- Ditto, Liverpool,
 Ditto, Birmingham,
 64, 65. Railway carriages.
 66. Ditto, details.
 67, 68. Railway trucks and wheels.
 69. Joon and concent memory. 69. Iron and oovered waggons.
- 70. Details of brakes.
 71. Wheels and details.
- 72. Portrait.