AMERICAN VERSUS ENGLISH METHODS OF BRIDGE DESIGNING.

(From Columns of the "Japan Mail.")

(July 16th, 1885.)

REVIEW.

A System of Iron Railroad Bridges for Japan. By J. A. L. Waddell, C.E., B.A.Sc., Ma, E. Published by the Tōkyō Daigaku, 1885, A.D.

Professor Waddell's work on Iron Railroad Bridges for Japan forms the eleventh memoir issued by the Tōkyō University. In issuing this memoir the University has taken a step in an entirely new direction; for hitherto the memoirs have been confined to the treatment of general science, whilst this one is on an essentially technical subject. Professor Waddell occupies the Chair of Civil Engineering in the University.

The work is divided into two parts bound separately; the first, containing the text, and the second, tables and plates.

Part I. consists of 258 pages, and is divided into twenty-four chapters, exclusive of a Glossary and an Index.

Part II. contains twenty-four tables, twelve plates and thirty diagrams of stresses and sections.

Chapter I. consists of an introductory letter addressed to the civil and mechanical engineers of Japan. It explains the author's object in writing the treatise; insists on the necessity of a system of iron railroad bridges built upon thoroughly tested scientific principles instead of the rule of thumb methods by which the present Japanese bridges are designed, and maintains that the American system of bridge designing is immensely superior to that of the European.

Chapter II. gives tables of the sections of bridge iron rolled by the principal manufacturers of Europe and America.

Chapter III. contains a list of the different portions of bridges built