A TEXT-BOOK ON RETAINING WALLS AND MASONRY DAMS

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A Text-Book on Retaining Walls and Masonry Dams by Mansfield Merriman

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A TEXT-BOOK

ON

RETAINING WALLS

AND

MASONRY DAMS.

BY

MANSFIELD MERRIMAN,

PROFESSOR OF CIVIL ENGINEERING IN LEHIGH UNIVERSITY.

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SLOPES, WALLS AND DAMS.

CHAPTER I.

EARTHWORK SLOPES.

ARTICLE 1. EQUILIBRIUM OF LOOSE EARTH.

Earthwork slopes are the surfaces formed when excavations, embankments, terraces, mounds, and other constructions are made in or with the natural earth. The earth is to be regarded in discussion as homogeneous and inelastic, and as consisting of particles more or less united by cohesion between which friction is generated whenever exterior forces tend to effect a separation. As some kinds of earth when dry are destitute of cohesion, these will first be considered under the term "loose earth."

The friction of earth upon earth will be taken to be governed by the same approximate laws as for other materials, namely: first, the force of friction between two surfaces is directly proportional to the normal pressure; second, it varies