



**Barry Lawrence Ruderman
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**[Mississippi River Atlas] Theorie der Bewegung des Wassers in Flüssen und Canälen. .
. . (Atlas Volume)**

Stock#: 101700
Map Maker: Grebenau / Humphreys
Date: 1867
Place: Munich
Color: Color
Condition: VG
Size: 10 x 15 inches (binding)
Price: \$ 875.00



Description:

Humphreys' and Abbot's Mississippi River

Pioneering Work of River Engineering and Hydraulics

Scarce German edition of Humphreys' famous work, first published in Philadelphia in 1861. The atlas focuses on the movement of water in rivers and canals, and is based on Humphreys' and Abbot's report on the physical and hydraulic conditions of the Mississippi River, its tributaries, estuaries, and alluvial regions.



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The measurements conducted by Humphreys and Abbot significantly contributed to the development of the extended Kutter formula, which is used for calculating the discharge of lowland rivers and mountain streams.

The large colored map (plate 1) shows the course of the Mississippi from Cairo to the Gulf of Mexico: Karte des Mississippi und seiner Alluvial-Region von Cairo bis zum Golf von Mexico. 1861.

The remaining plates are mostly longitudinal and cross profiles, level and velocity curves, as well as discharge curves.

The original *Report upon the Physics and Hydraulics of the Mississippi River; upon the Protection of the Alluvial Region against Overflow; and upon the Deepening of the Mouths; Based Upon Surveys and Investigations Made Under Acts of Congress*, was authored by Andrew Atkinson Humphreys and Henry Larcom Abbot. This comprehensive report, first published in 1861 in Philadelphia, stands as a seminal work in the field of river engineering and hydraulics.

Andrew Atkinson Humphreys and **Henry Larcom Abbot** were both distinguished officers and engineers in the U.S. Army Corps of Engineers. Their work on the Mississippi River was groundbreaking and influential in understanding the dynamics of this major river system.

Key Aspects of the Report:

1. **Physical and Hydraulic Analysis:** The report provided a detailed analysis of the physical and hydraulic conditions of the Mississippi River. It included observations and data on the river's flow, sediment transport, and its changing course.
2. **Focus on Flood Control and Navigation:** The study had significant implications for flood control, navigation, and managing the alluvial lands surrounding the river. It addressed issues like the protection of the alluvial regions against overflow and methods for deepening the river's mouths to improve navigation.
3. **Methodological Innovations:** The report was notable for its methodological rigor, incorporating extensive field surveys, measurements, and innovative analytical techniques for the time.



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4. **Impact on River Engineering:** The findings and methodologies of Humphreys and Abbot had a lasting impact on the field of river engineering, influencing subsequent studies and engineering practices.

Understanding and managing the Mississippi River, given its size, complexity, and importance, was a significant challenge in the 19th century, and the contributions of Humphreys and Abbot provided a foundational understanding that would guide future efforts in river management and engineering.

Provenance: K. Polnt. Schule

Detailed Condition:

Folio. Original cloth-backed printed boards. Lower corners bumped. Some minor spot stains to lower gutter part of boards. Very occasional fox mark, not affecting printed areas. Generally very clean and nice internally. 18 charts, graphs and maps (including a large folding color map, the rest mostly double sheet, some folding).