

The author has made a careful selection of material. The movements of major geologic materials are the most significant in Holland's world view, and these are treated to the virtual exclusion of trace chemical transport. Thus, the river transport of chloride, sulfate, bicarbonate, calcium, magnesium, sodium, potassium, and silica is discussed at length; the rest of the elements present in rivers receive only a tabular listing of median concentrations. The discussion of ocean chemistry is focused primarily on the deposition of calcium carbonate and silica to the sea floor, with additional discussion of evaporite formation and the organic matter and interstitial water contents of sediments. The atmosphere is treated mainly in relation to the geologic processes that govern its principal gases—noble gases derived from the outgassing of the earth, carbon dioxide and oxygen and their terrestrial sources and sinks—with additional comments on nitrogen and sulfur compounds.

This broad treatment of the geologic ocean-atmosphere system is to be followed by a volume dealing with the history of the system. The descriptive material presented here should serve as a basis for understanding the historical processes to be unfolded in the next volume. This reviewer is looking forward to reading it.

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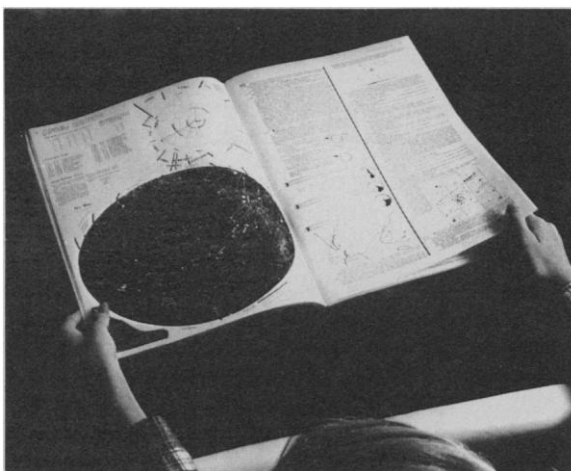
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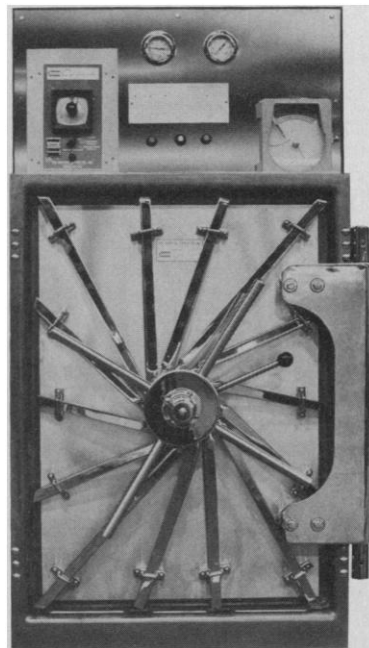
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