

**ON THE EFFECTS OF CERTAIN  
INACTIVE SUBSTANCES ON  
THE OPTICAL ACTIVITY OF  
PINENE**

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On the Effects of Certain Inactive Substances on the Optical Activity of Pinene by Charles Baldwin Gates

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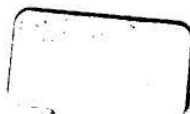
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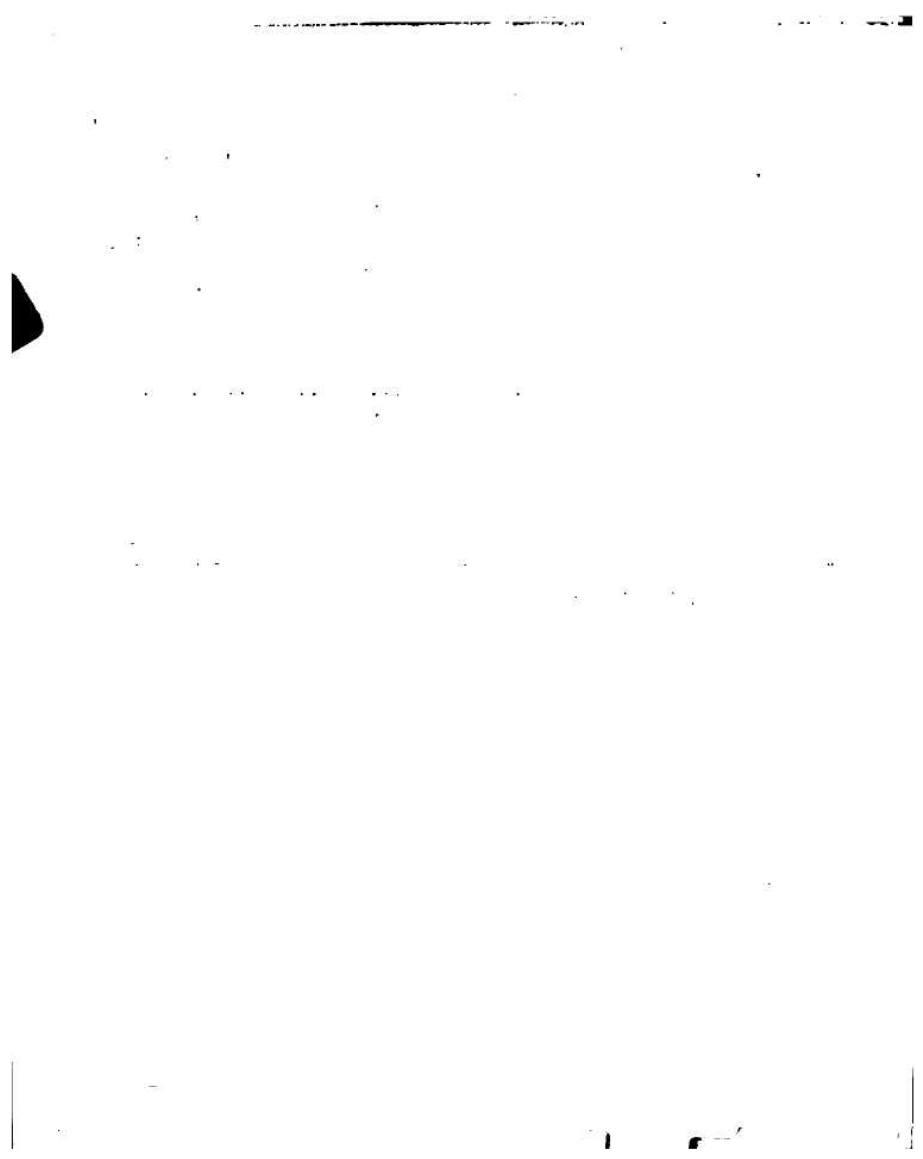
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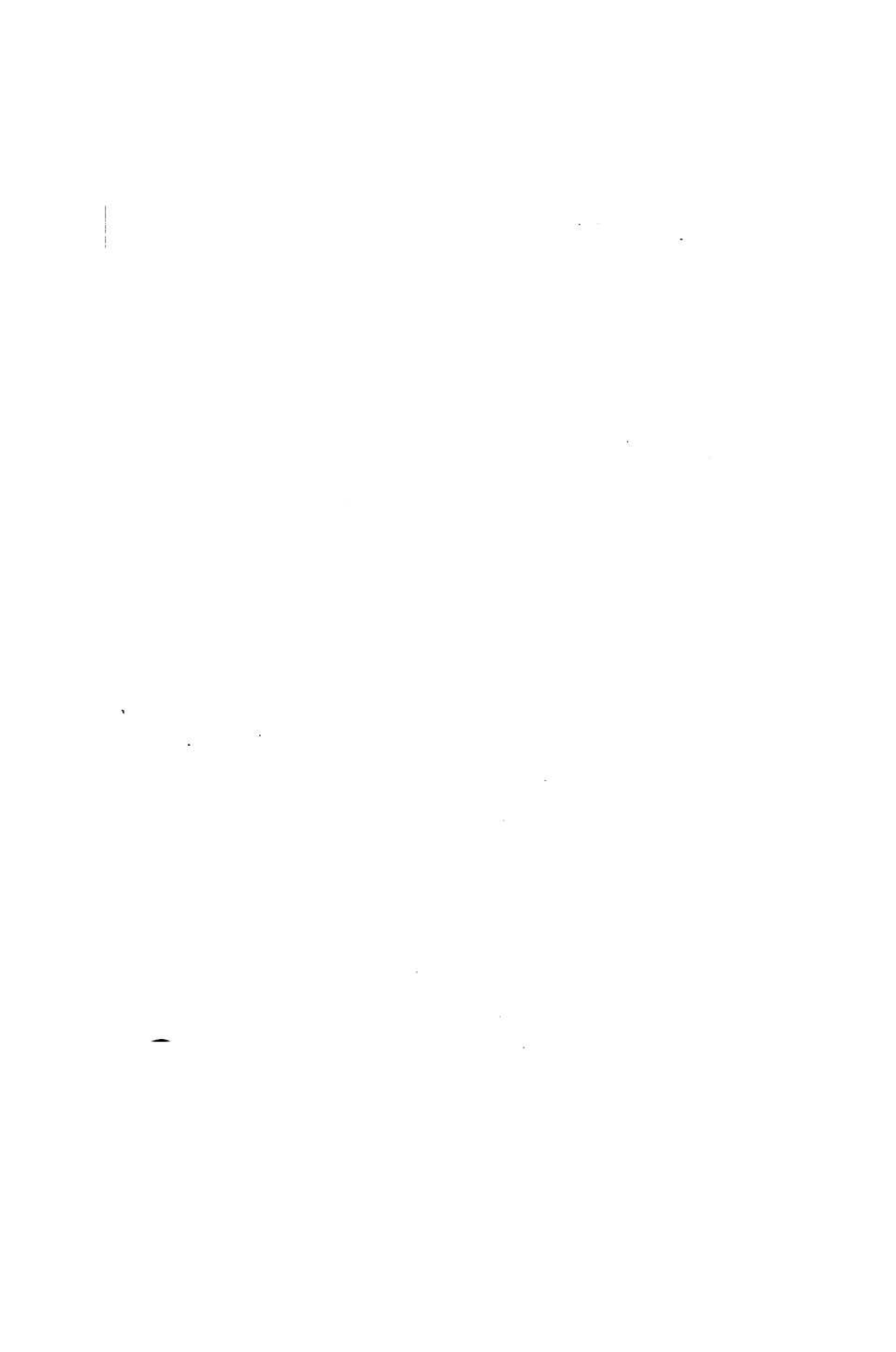
CHARLES BALDWIN GATES

A Thesis Submitted for the Degree of  
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UNIVERSITY OF WISCONSIN

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ON THE EFFECTS OF CERTAIN INACTIVE SUBSTANCES

ON THE OPTICAL ACTIVITY OF PINENE

The object of this work was to find what substances, or classes of substances, would dissolve in pinene, yielding clear solutions, sufficiently light in color to permit their being used in the polariscope; and then to determine the specific rotation of the solutions thus formed. The rotation of the pure solvent being known, comparable results were obtained, which it was hoped might throw some light on the question of solution itself.

The solutions were made up carefully, each component being weighed out to the fourth decimal place. The specific gravity ( $D_4^{25}$ ) was determined at once, with the same degree of accuracy. Then the solution was put into a two-decimetre tube and its rotation determined immediately, that there might be as little opportunity for slow change as possible. For pinene itself, a six-decimetre tube was

