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## THE EULER-SAVARY EQUATION AND THE CUBIC OF STATIONARY CURVATURE

### 7-1 THE EULER-SAVARY EQUATION AND THE INFLECTION CIRCLE

The discussions of coupler curves have so far dealt with certain particularities of a curve, such as how to achieve (or avoid) double points and symmetry. A further important characteristic is the determination of the center of curvature at points on the curve by a direct method. By this is meant a procedure that does not depend on first establishing the velocity and normal acceleration component of the point, after which the radius of curvature and its center may be found. Other things of interest include being able to discover or predict coupler points tracing approximate straight-line or circular-arc segments, which the designer may exploit in the arrangement of the mechanism.

What is known as the Euler-Savary equation gives the radius of curvature and the center of curvature of a coupler curve in rather direct fashion. In the course of the development other welcome information is gathered. The so-called inflection circle shows the location of coupler points whose curves have an infinite radius of

