

The important lesson to be learned is that the center of gravity, although it should be in front of the center of surface to secure a front dive when headway is lost, should be as little removed from that point as possible. The further forward the center of gravity is placed, the quicker will be the turning action produced by gravity and the steeper the dive that is necessary to restore headway.

These conditions then are important which reduce the rapidity of the turning movement, so that there may be time to gain steering headway before the head has tipped down to a dangerous extent. The conditions that reduce the rate of turning are:-

1. The center of gravity as near the center of surface as possible, so that gravity may not have much leverage to help the turning movement.

2. The front control very far removed from the main supporting aeroplanes, so as to secure the advantage of leverage in resisting the turning movement.

3. Large surfaces upon the front control to increase its resisting action.

4. A horizontal tail very far removed from the main supporting aeroplanes, to retard the turning movement by the pressure of air upon its upper surface.

5. A large surface for the tail to increase its resisting action.

All these conditions tend to reduce the velocity of the turning movement, and therefore facilitate the acquisition of steering headway before the downward tip has become too steep for safety.