

shut off might save his life. An accident to the stern might cause you to lose control of the whole machine and you might not know what was wrong.

The dangerous thing is loss of headway. In all our machines that is the only thing we have to fear very much. As long as you have good steering way you won't have a very bad fall. If you lose headway, I think a bow control is a safer proposition than a tail because your center of pressure, when in flight at small angles, is well forward. Your weight has to go forward when you speed up. You must either have your center of gravity well forward of the center of surface or else shift the controlling planes to meet it. You could have your center of gravity somewhere near the center of surface of the machine and control the travel of the center of pressure by using your front control at a negative angle and then if you lose all headway your machine is nicely balanced for a slow glide, the center of gravity being very little in advance of the center of surface. I think the safest possible proposition would be a good big bow control on a good long arm and travel with it at a slightly negative angle.

Dr. Bell:— Then I understand that you admit the main proposition, about the pole with a horizontal surface at one end to be correct, but think that the main surface of the aereodrome being back of the center of gravity, renders the two cases not comparable, that in fact in the aereodrome case, you have two surfaces, one in front and the other behind the axis of turning, and the one behind very much larger than the one in front. But in this case the main surface which is supposedly