

mirror in front might not be of advantage into which the aviator could look and see the moving parts behind him, or on either side, without the necessity of turning his head.

The Wright machine, after the accident, was found with its head pointing in a very different direction from that in which it was going when the propeller broke, suggesting the idea that it had spun around at least 90° before it reached the ground, and had thus lost its notion of translation through the air. Whether or not this was the immediate cause of the disaster to the Wright machine, it is safe to say, that under present conditions of aerodrome construction, loss of headway is the greatest danger the aviator has to fear. This, I think, will be admitted by all.

But why should loss of headway be accompanied by danger? This is of the greatest consequence for us to determine for a machine may lose headway at any moment from causes that are quite beyond our control. An engine may break down, a propeller may go, even an unexpected gust of wind may stop our machine for a moment, and at once danger results. What usually happens under such circumstances? The machine turns head down and dives. What does this indicate? That the machine is not properly balanced when headway is lost. The turning down of the head shows that the center of gravity is too far forward for a good balance when headway is lost. The advanced position of the center of gravity is then the cause of the danger.

Now it is somewhat disconcerting to find that the tendency of progress in the Hammondsport experiments has been to advance the position of the center of gravity in our mach-