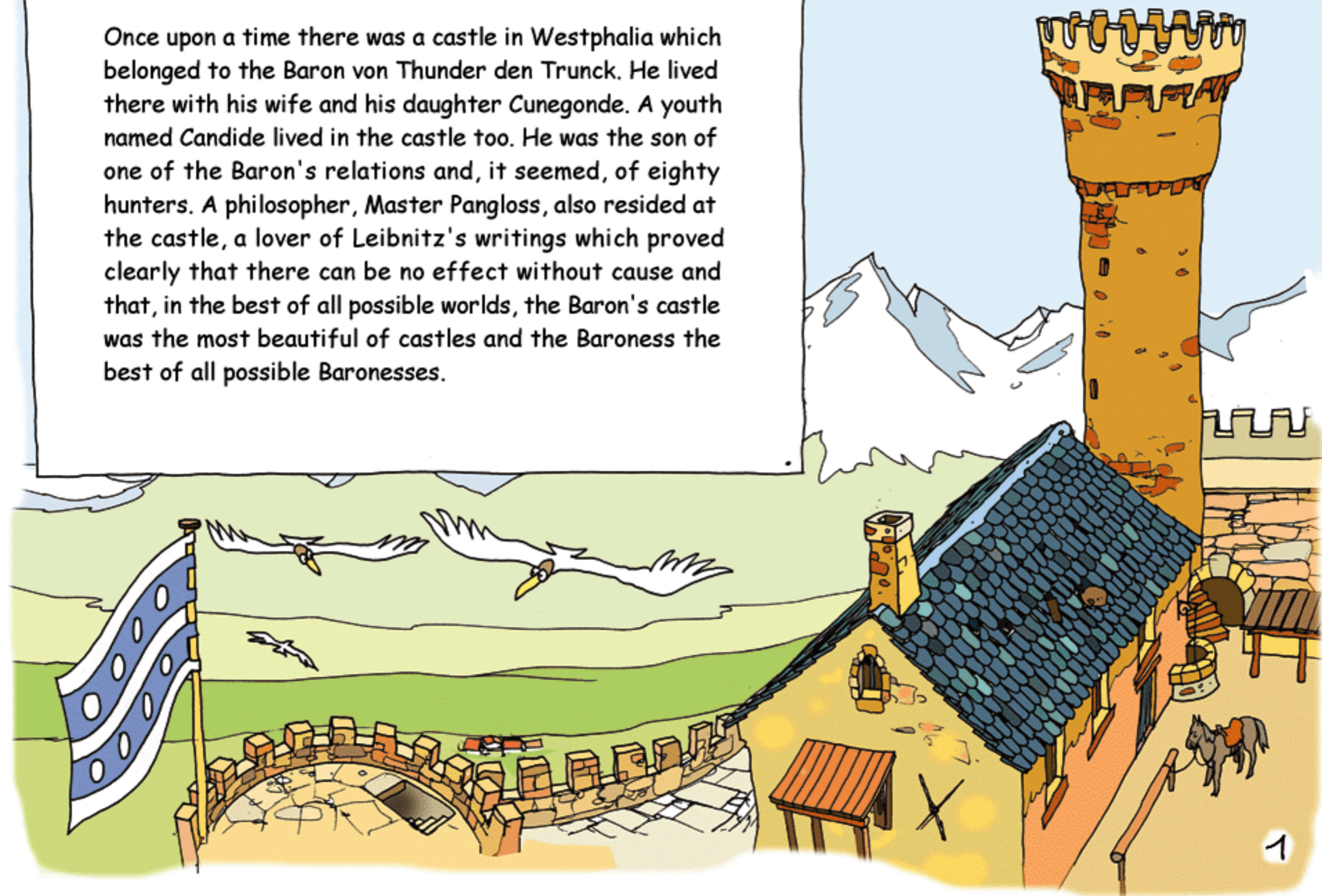


# VERTICAL PASSION

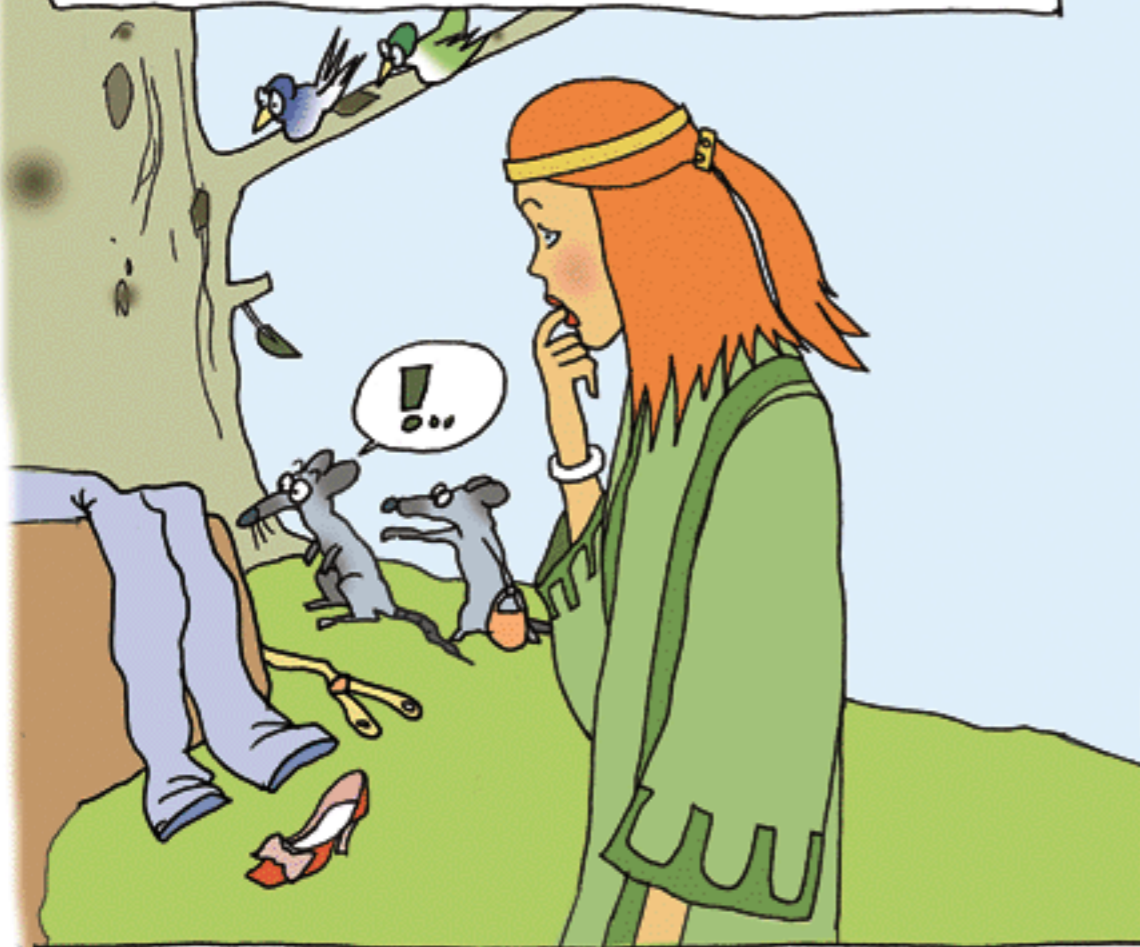
Jean-Pierre Petit



Once upon a time there was a castle in Westphalia which belonged to the Baron von Thunder den Trunck. He lived there with his wife and his daughter Cunegonde. A youth named Candide lived in the castle too. He was the son of one of the Baron's relations and, it seemed, of eighty hunters. A philosopher, Master Pangloss, also resided at the castle, a lover of Leibnitz's writings which proved clearly that there can be no effect without cause and that, in the best of all possible worlds, the Baron's castle was the most beautiful of castles and the Baroness the best of all possible Baronesses.



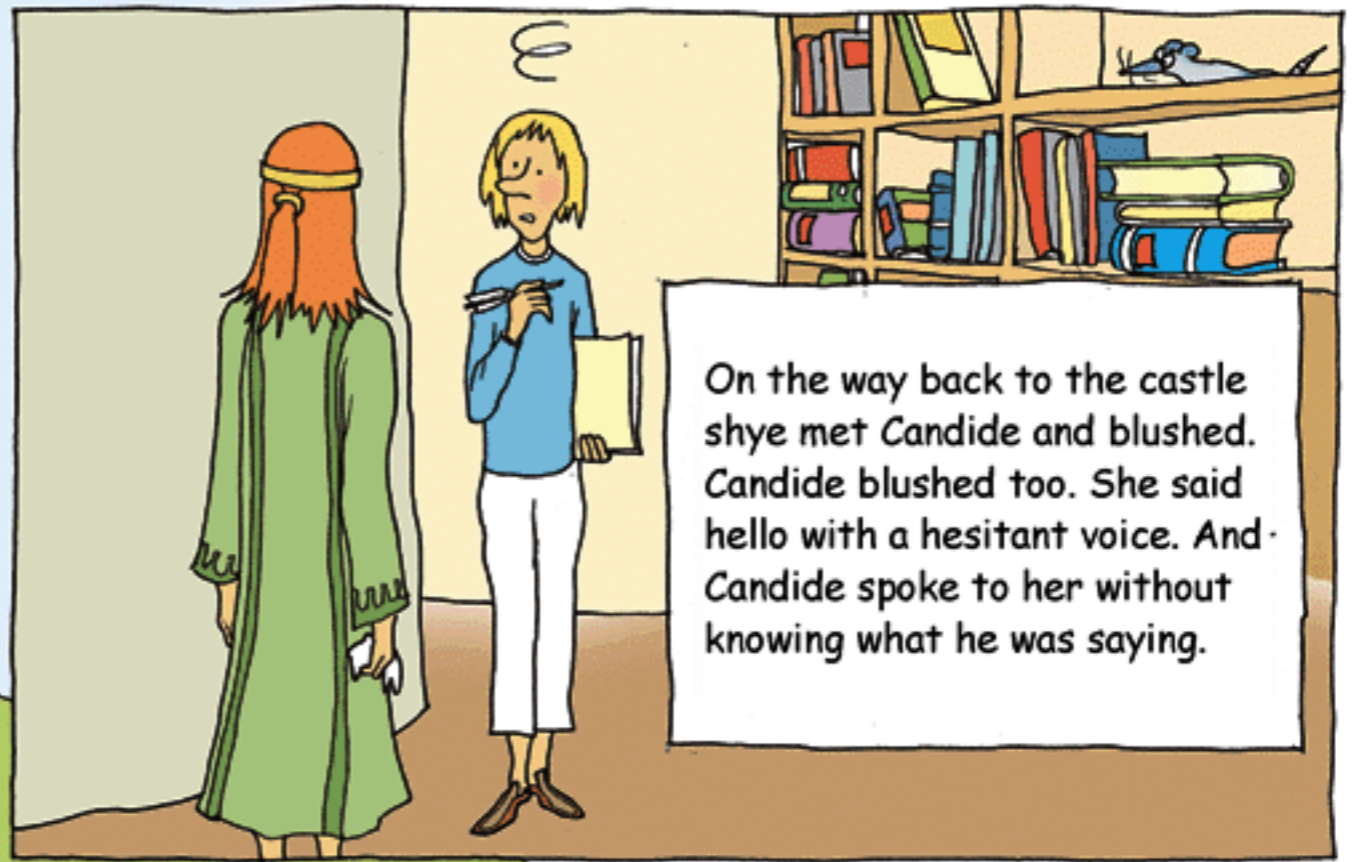
One day young Cunegonde, aged seventeen, saw professor Pangloss giving a lesson in experimental physics to Baroness's chambermaid in a wood near the castle. Having a special liking for science she observed the many experiments that she witnessed. (\*)



She followed clearly the reasoning of the doctor, effects and causes, and went home very agitated and thoughtful, with a great desire for instruction.



On the way back to the castle she met Candide and blushed. Candide blushed too. She said hello with a hesitant voice. And Candide spoke to her without knowing what he was saying.





Cunegonde dropped her handkerchief. Candide bent down to pick it up. She did the same. Their hands touched, their knees trembled



their lips touched, their hands wandered. The Baron, passing that way, saw this scene, its effects and its causes (\*).



The baron chased Candide away, kicking him in the backside (\*)

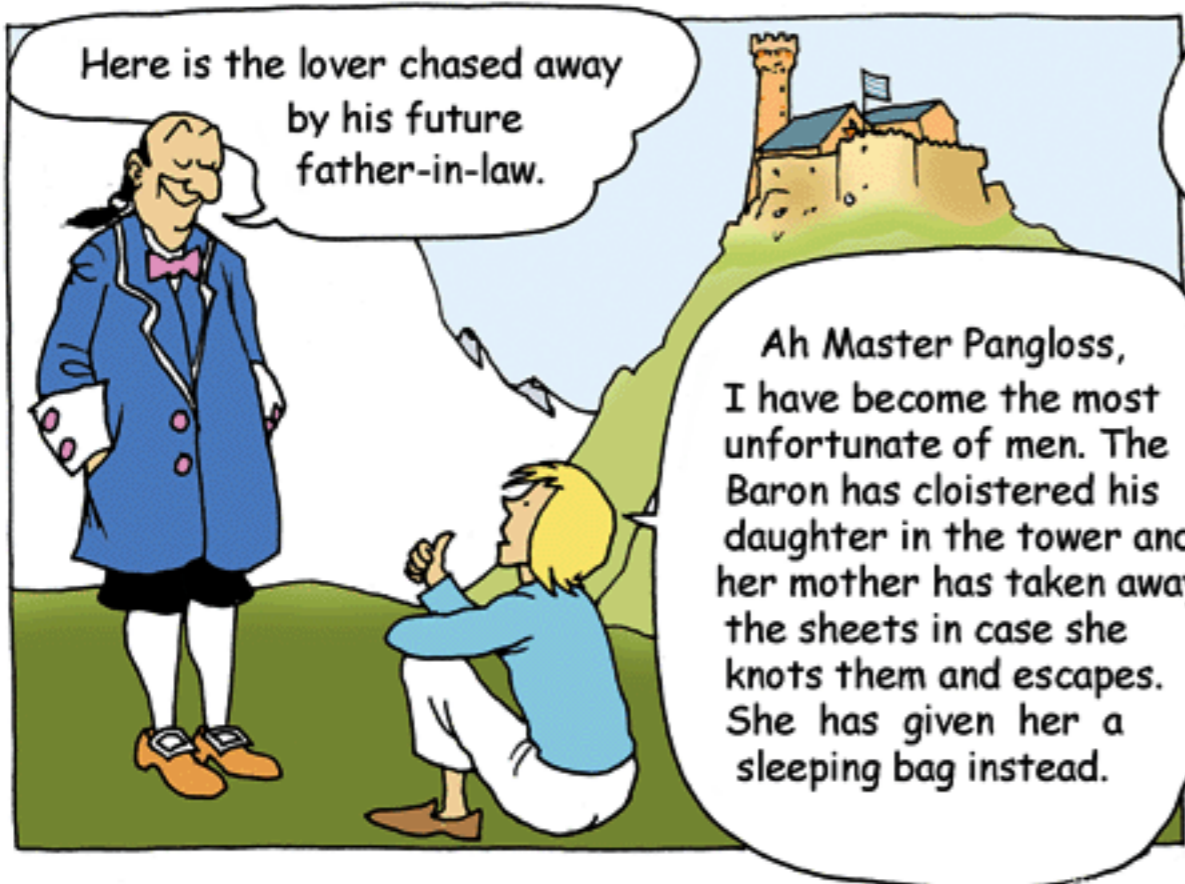


The Baroness told off Cunegonde and shut her up in a room at the top of the castle watchtower.



And everything was upset in the best of all possible castles.

(\*) Extracts for the book "Candide" by Voltaire (1694 - 1778)



Here is the lover chased away by his future father-in-law.

Ah Master Pangloss, I have become the most unfortunate of men. The Baron has cloistered his daughter in the tower and her mother has taken away the sheets in case she knots them and escapes. She has given her a sleeping bag instead.



We are ready to run away together, anywhere, but I'd need to become a bird to snatch her away from that awful prison.

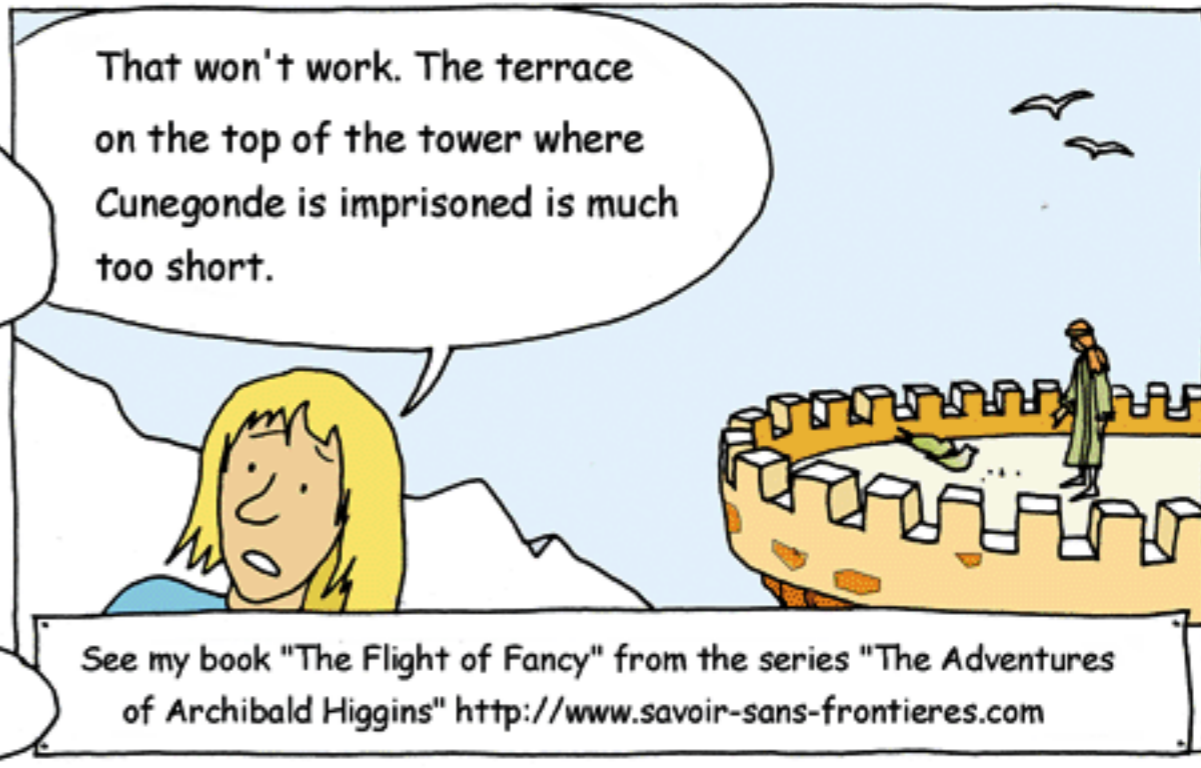
Maybe I can do something for you.



I have a flying machine: an aeroplane.

What distance do you need to land?

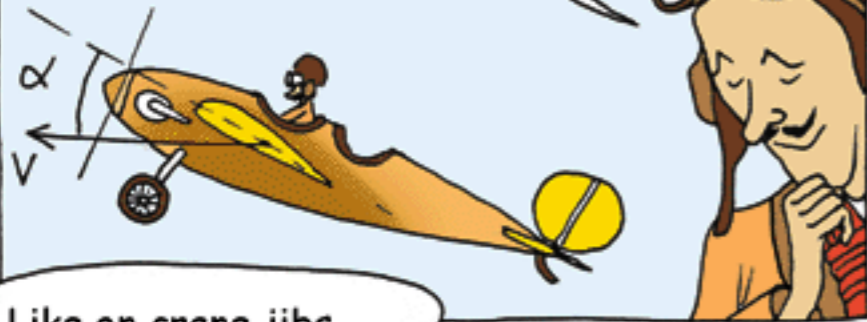
About 150 metres.



That won't work. The terrace on the top of the tower where Cunegonde is imprisoned is much too short.

See my book "The Flight of Fancy" from the series "The Adventures of Archibald Higgins" <http://www.savoir-sans-frontieres.com>

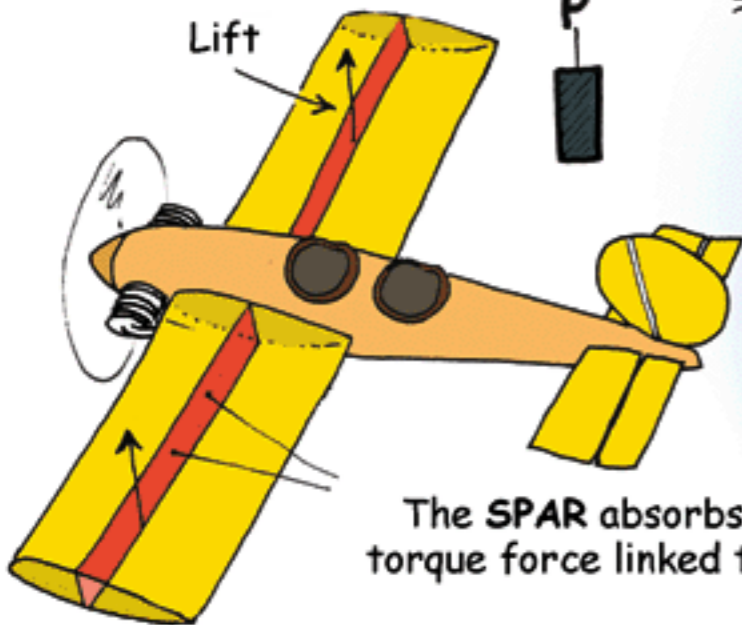
I should be able to reduce the distance needed by approaching at a lower speed. The lift on the wings is proportional to the incidence?. By nosing up the plane I should be able to fly a lot more slowly.



Like on crane jibs.



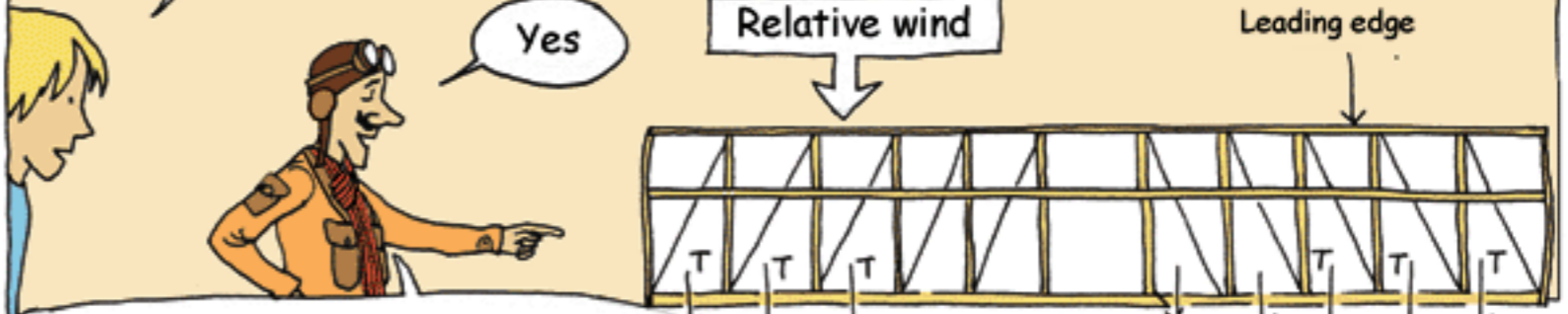
The bars work as **TRACTION**



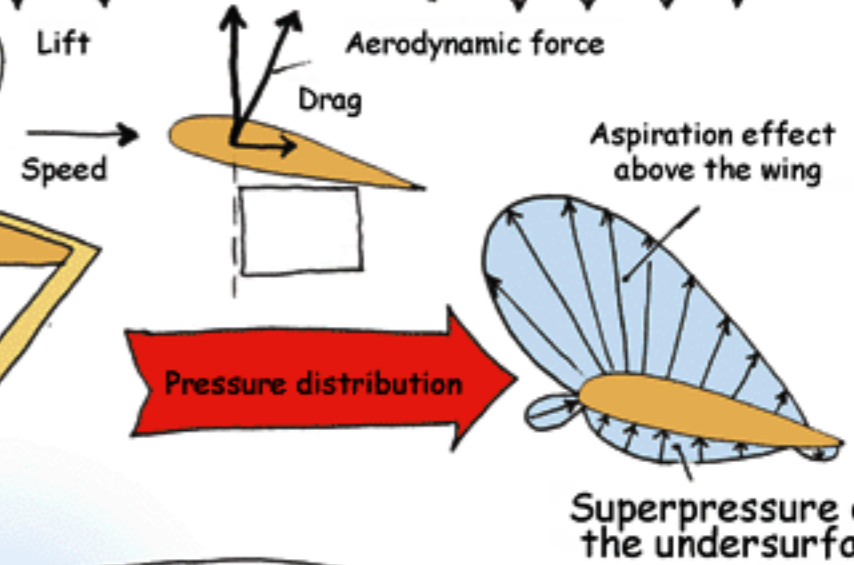
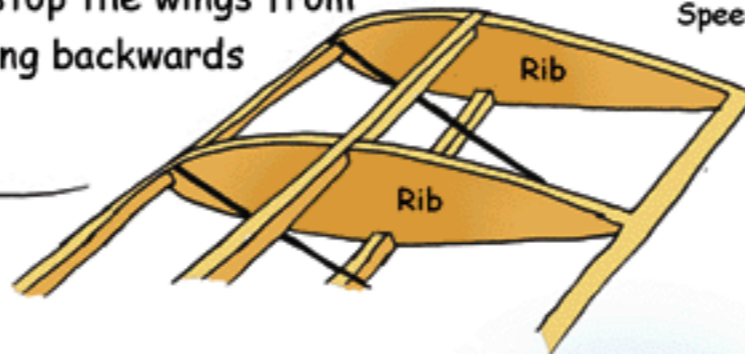
The **SPAR** absorbs the torque force linked to **LIFT**.

So it's this wing that allows you to remain in the air?

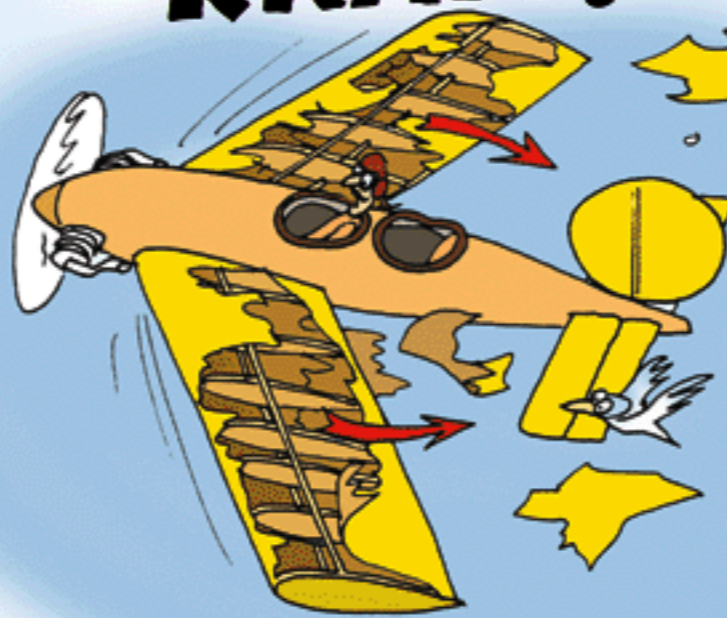
Yes



I've added stiffening cables which absorb the strong drag forces and stop the wings from folding backwards



**KRAK!**



Gentlemen, without these precious stiffeners the wings would break up.

A wise precaution.



So let's see how we can reduce the speed by nosing up the machine.

I pull on the joystick

**KRAAAAK!**

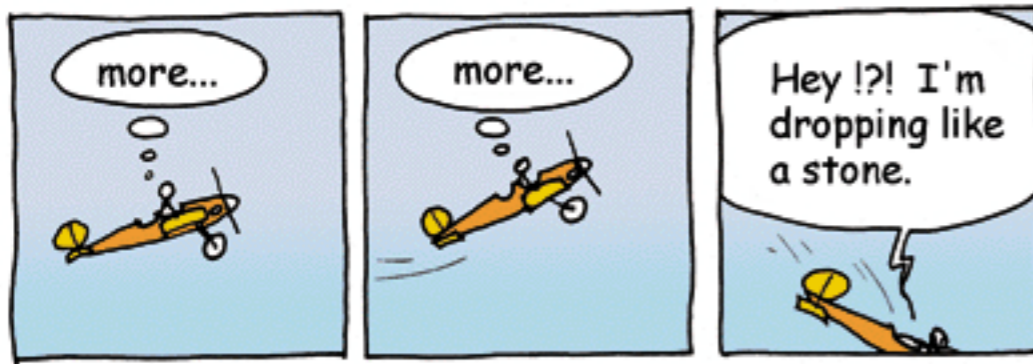
Suddenly the wings snap and fold towards the front!

**!!!**

OK, it's all sorted out. It just needed a second series of stiffeners to stop the wings folding forwards.

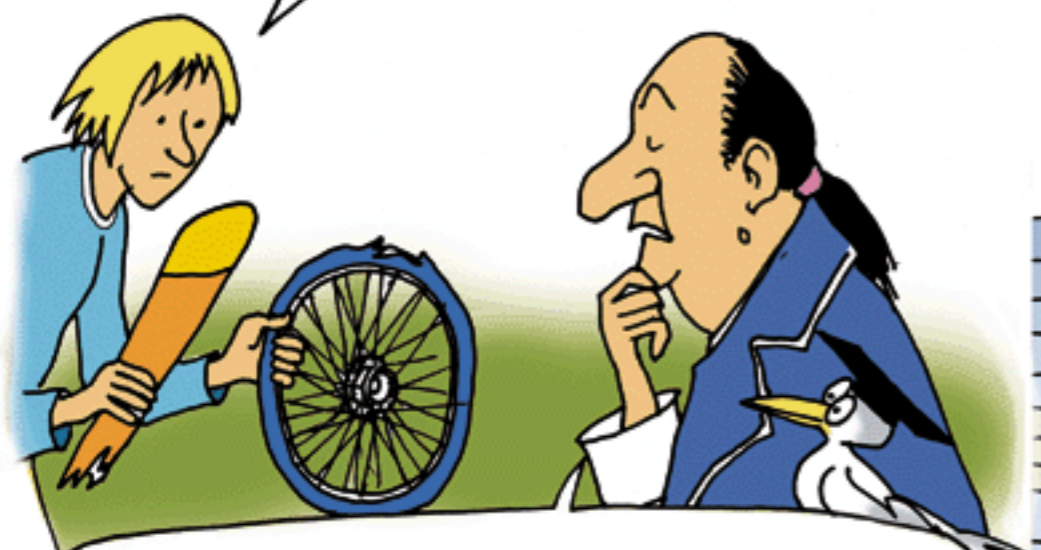
The plane is now correctly strengthened. I'll tilt it slowly.

At least, it should nose up, otherwise I'll want to know why.



# STALLING

Well I won't be able to free Cunegonde with this machine. In fact I wonder if this thing has any future at all.



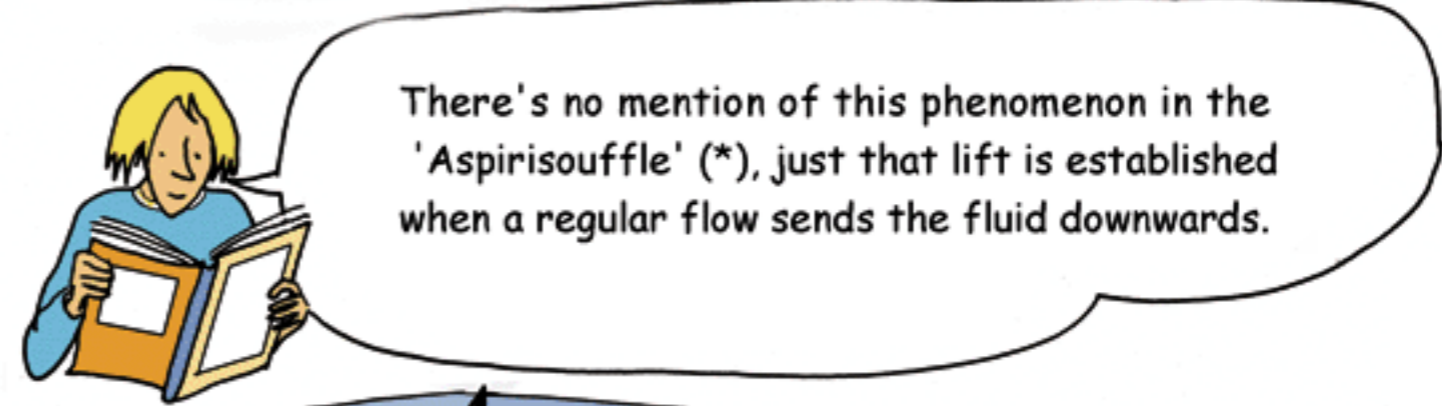
As there is no effect without cause we need to discover a good reason for this sudden loss of lift.



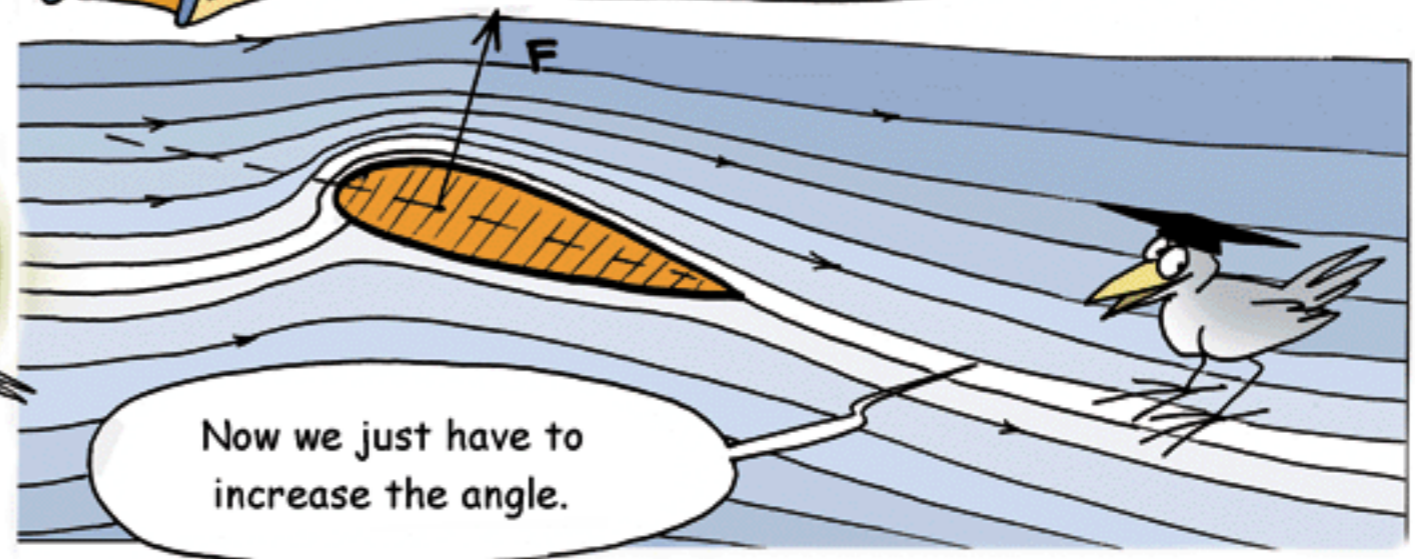
This time you were really lucky that there was haystack below you.

What happened ?

I don't know. At a certain angle I lost all lift !?!



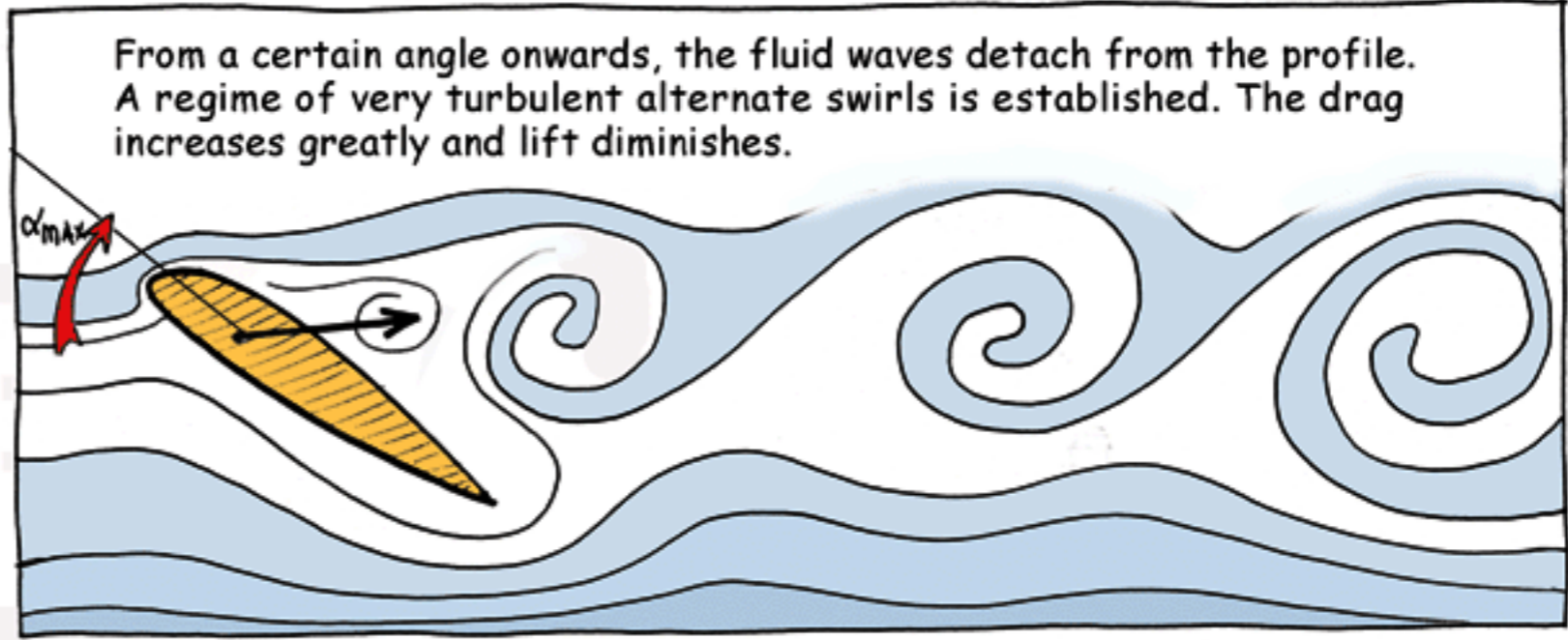
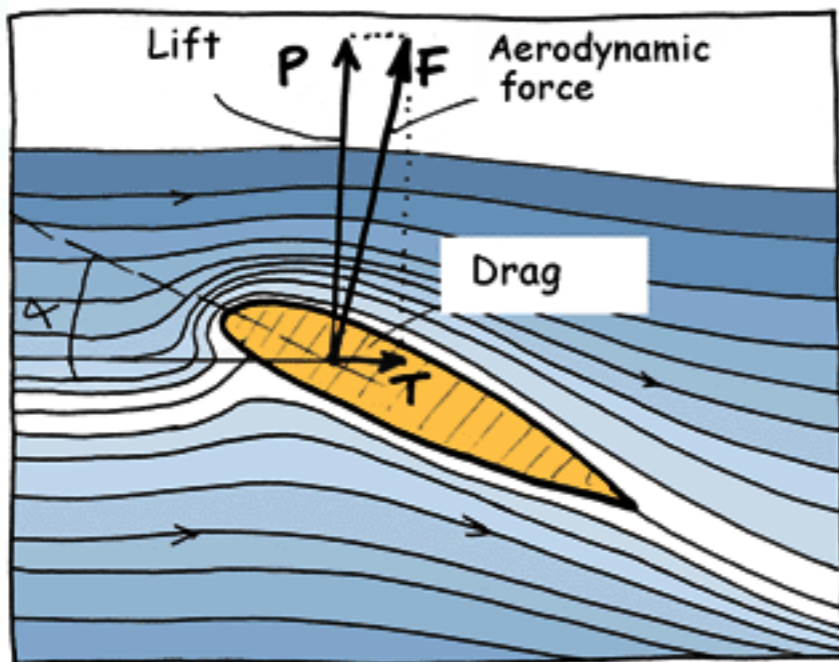
There's no mention of this phenomenon in the 'Aspirisouffle' (\*), just that lift is established when a regular flow sends the fluid downwards.



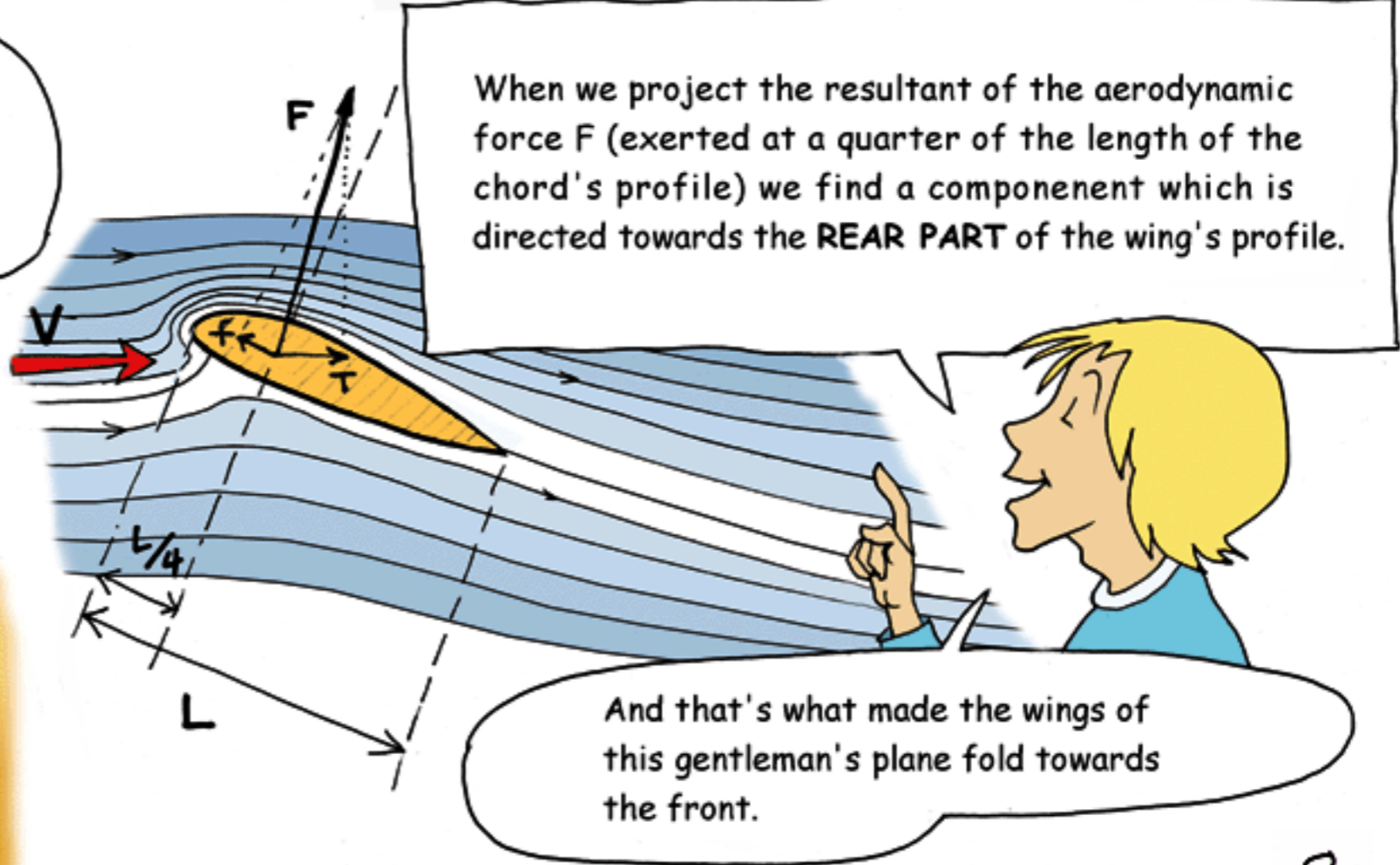
Now we just have to increase the angle.

(\*) <http://www.savoir-sans-frontieres.com>





When I looked at the flow map corresponding to high incidence, I noticed something.



And that's what made the wings of this gentleman's plane fold towards the front.