THE SCIENTIFIC THOUSAND 1 Translated by John Murphy AND ONE NIGHTS

JEAN-PIERRE PETIT

Once upon a time there lived a Sultan in a magnificent palace in a distant part of the Orient. He had everything, gold, women, magnificent horses. But each night he could not sleep because he asked himself all sorts of questions to which he could find no answer. Each night he called for his grand vizier, Schatzmani.

Schatzmani, listen, last night in a dream I saw a very strange object. It was split down the middle

> and that made just a single object!

A single object my lord, but that's impossible I saw it! I want this object. It exists.

Find it. Your life depends on it.

I'll give you three days!

But... Lord!

Lanturlu!

If you do not bring this object within three days, I will send you to the executioner.

The Sultan is not not joking, because of his terrible insomnia!

H

Here's the grand vizier.

What have I done
this time?

You have three days, not one more, to invent an object that when split according to its median part, just makes one

If you cannot, then
I shall have you
put to death!



(But... Master, \ (I'm just a valet...)

Ah!

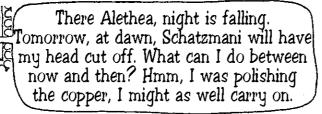
It's obvious that Schatzmani wants me dead. It is impossible to find such an object because it doesn't exist. If I cut through this bracelet according to its median line, I get two cylinders and not just one band.

I've travelled throughout the kingdom and I have seen nothing that could resemble what your master, the vizier Schatzmani, is asking for.



Effectively.

The third, fateful day arrived.



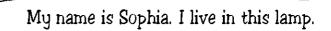
By Allah, this lamp is very dirty, completely oxydised. I'll have to rub hard to get it to shine.

Ah, a bit of

air at last...

And Anselme Lanturlu rubbed the lamp...

Miah!



By the prophet, who are you?!? You live in this old oil lamp?

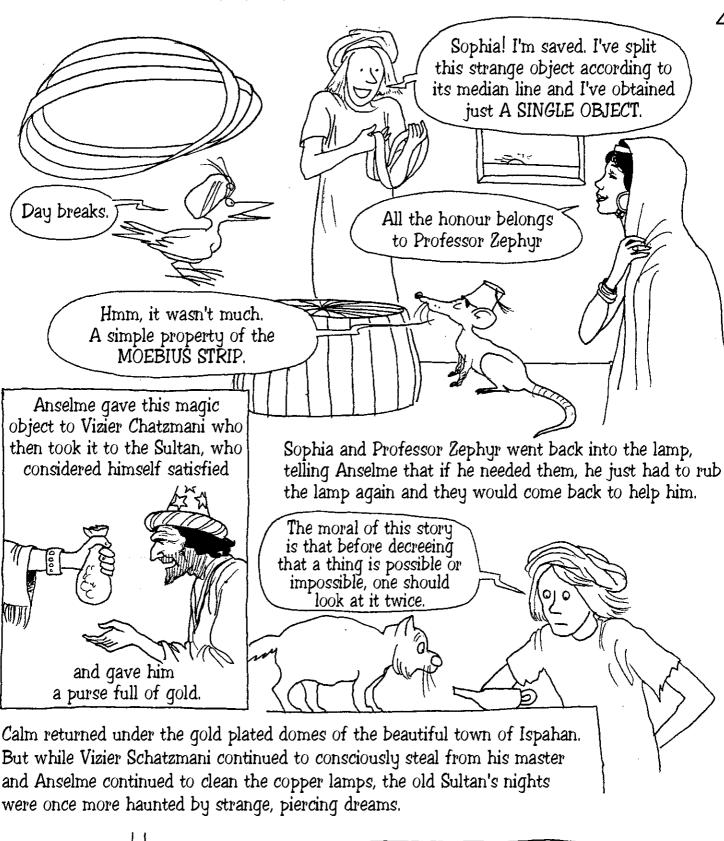
Yes, it's a complicated story that I'll tell you another time. For the moment, what is your problem?





Schatzmani, my master, told me that he will have my head cut off tomorrow morning if I don't find an object that when split according to its median line will give a single object. Well, I know that that is impossible. So at dawn I'll be handed over to the executioner.



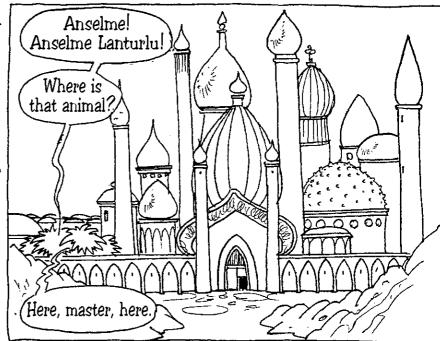


Schatzmani, last night something strange happened: I blew on an object and instead of it flying away it came towards me. The more I blew, the more it stuck itself on me. Go, and bring me this object. It exists because I saw it in my dream. Bring it to me within one moon, if not you'll reply with your life.

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Schatzmani, the grand vizier, is in a very bad mood.

Anselme, within two days you must find an object such that when you blow on it, it comes towards you instead of moving away, if not I'll have you hung.



Two days? The Sultan has reduced the time scale! Fortunately there is the maqic lamp.

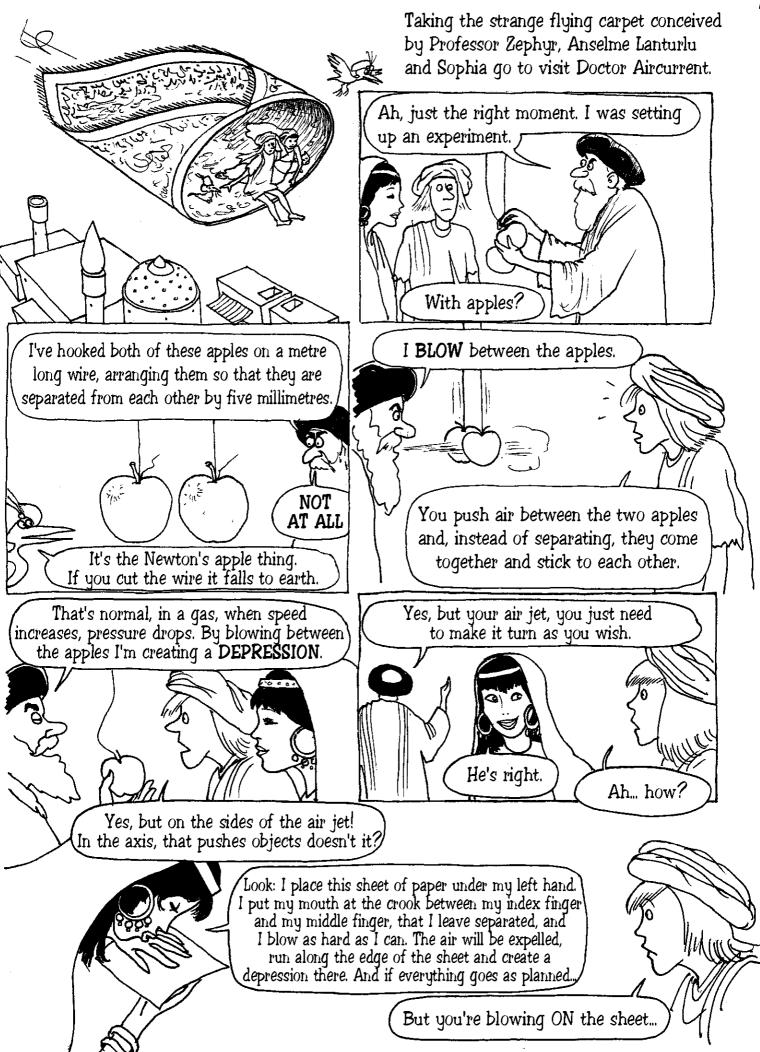


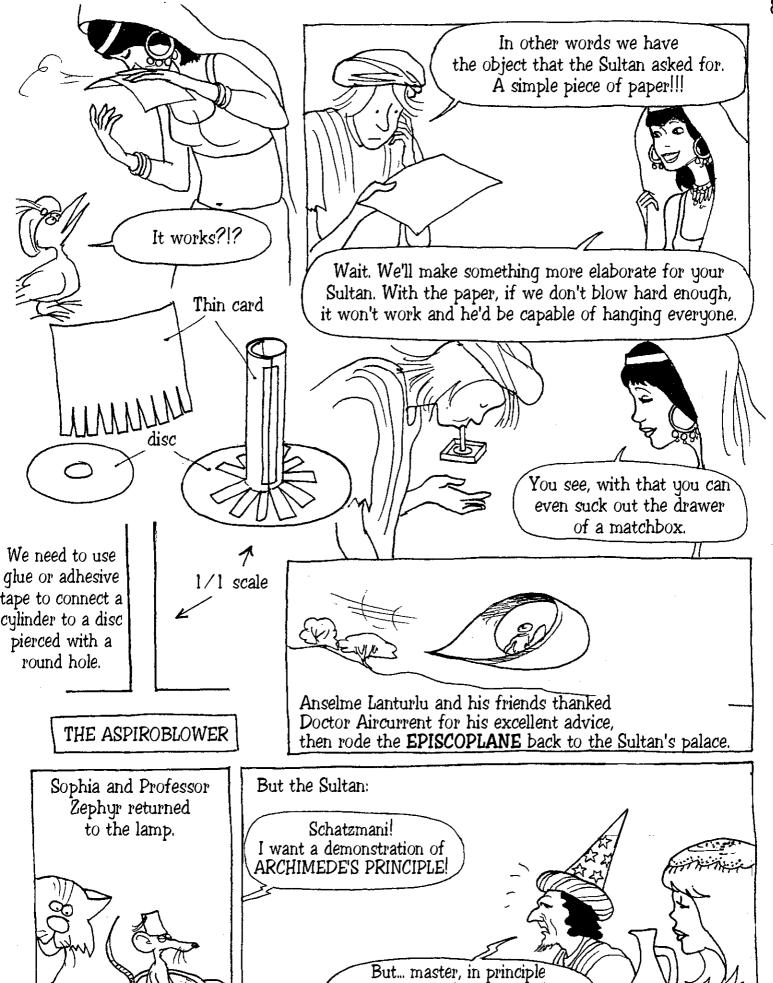
Ah Anselme, that's nice. I was beginning to get bored.



Sophia, we need you again. The Sultan is still suffering from insomnia. In his dreams he imagines insoluble problems and asks his grand vizier Schatzmani to solve them, and as I'm his valet, it all falls on me.





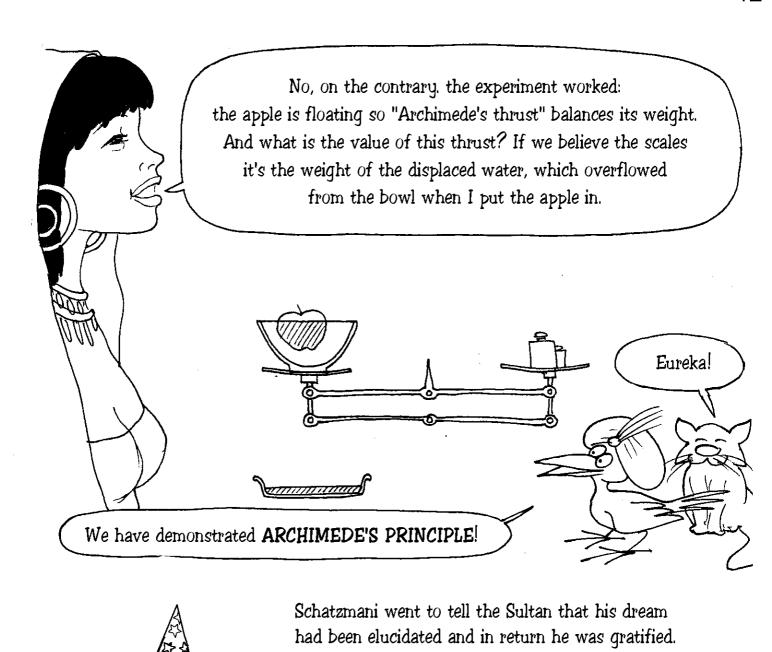


a principle does not need to be demonstrated!

THE SCIENTIFIC THOUSAND 3 AND ONE NIGHTS







Luckily, the apple was
less dense than the water.
If it had been the contrary,
goodbye the fine demonstration.

Hmmmmm

Anselme went back to his cooking pots.

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The Sultan has gone completely mad.

He had a visit from a magician who showed him that he could stop his heart. Now he wants me to accomplish the same wonder, if not he promises to have me hanged.

As usual, the Grand Vizier Schatzmani dropped all that on Anselme's head.

And remember. You have until tomorrow to find out how, otherwise!...

Apparently the magician has taken thirty years to accomplish this prodiqu.

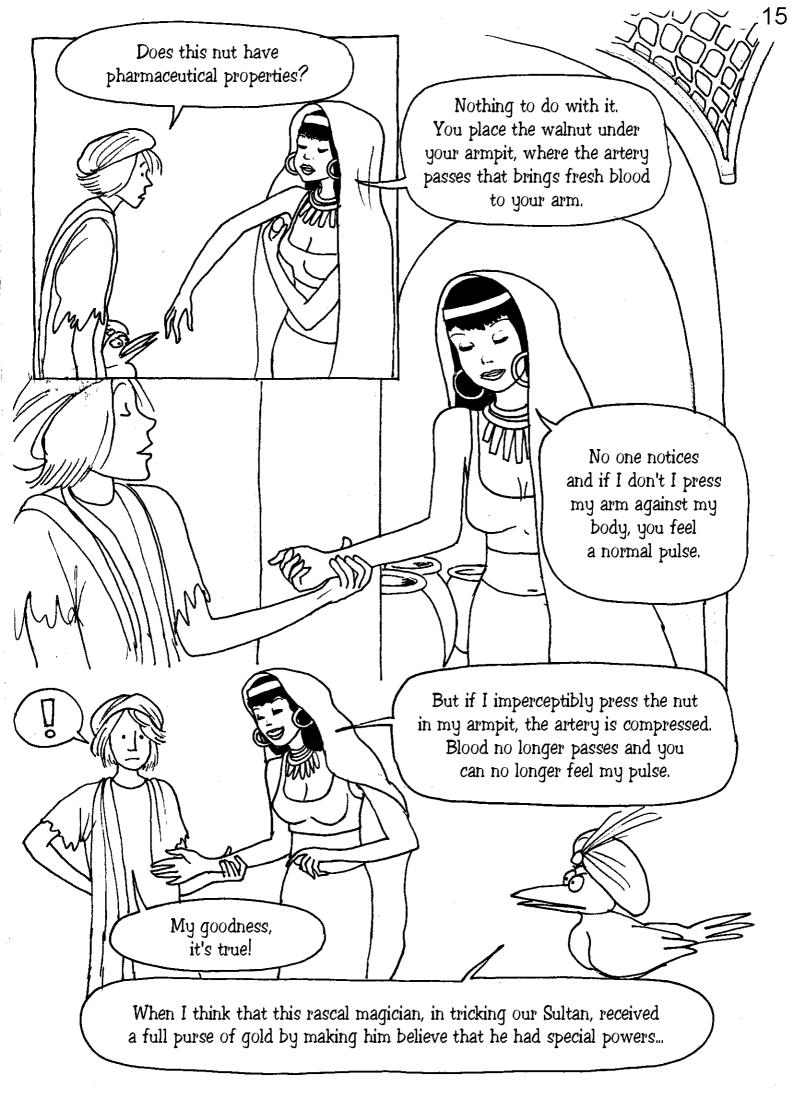
LANTURLU!

During that time he nourished himself only with nuts.

It needs at least thirty years of meditaton to be able to stop a heart.

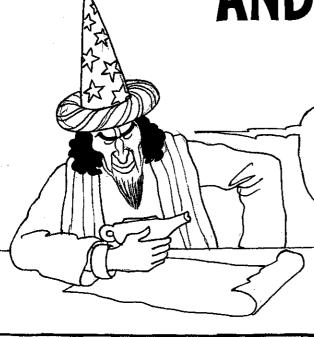
That's not science, that's magic. I'll see if Sophia can do something. Still, let's try. Here's the lamp.





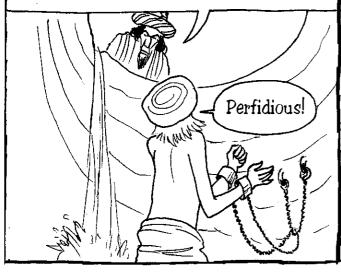


THE SCIENTIFIC THOUSAND 5 AND ONE NIGHTS



So this is the magic lamp from which Lanturlu gets all his knowledge. I just need to rub it, the genie will come out of the lamp and solve any problem.

I don't need you anymore. By the time this water has filled the cistern you will no longer be a problem for me.



This chain is too strong! I can't free my wrists. I'm done for!

Lord, test me. I have acquired so much science that I believe I can solve any of your eniqmas.



Well, I shall call you when a new enigma appears in one of my my dreams.

Anselme... I can't help you directly because I am shut in the magic lamp, but know that this problem has a solution.



A solution?!? But Sophia!
It is EVIDENT that this problem has no solution and that I'm condemned to death.



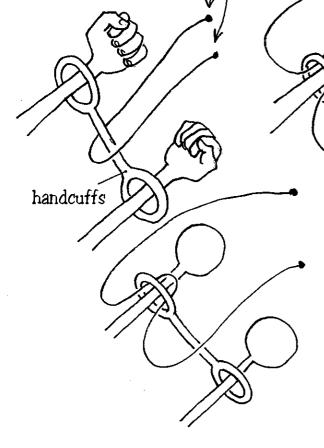
Don't get excited. You can release yourself... because you aren't really attached...



Reflect: You can't free your wrists from the handcuffs but, however, the chains can go between them and the skin of your wrists.

On reflection, Anselme ended up finding the solution

on Fixed chain We've deformed the handcuffs and Anselme's wrists so that



Anselme's wrists

the movement becomes more "legible". In order that the readers be able to do this trick easily themselves, using string, we have shown Anselme's handcuffs as simple rings of knotted cord.



What a fine morning.

Let's go and see if the Sultan
has had a dream with a new
scientific enigma.

The Sultan dreamed that he was attached in this way. He dreamt that he found the key and freed himself.

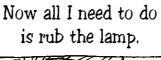






Ah, a precision: The ties A, C, F and E cannot be undone and the ring G, rigid, will not go through the hole B in any way.

Obviously, it's impossible to reach the key by simply pulling on the cord



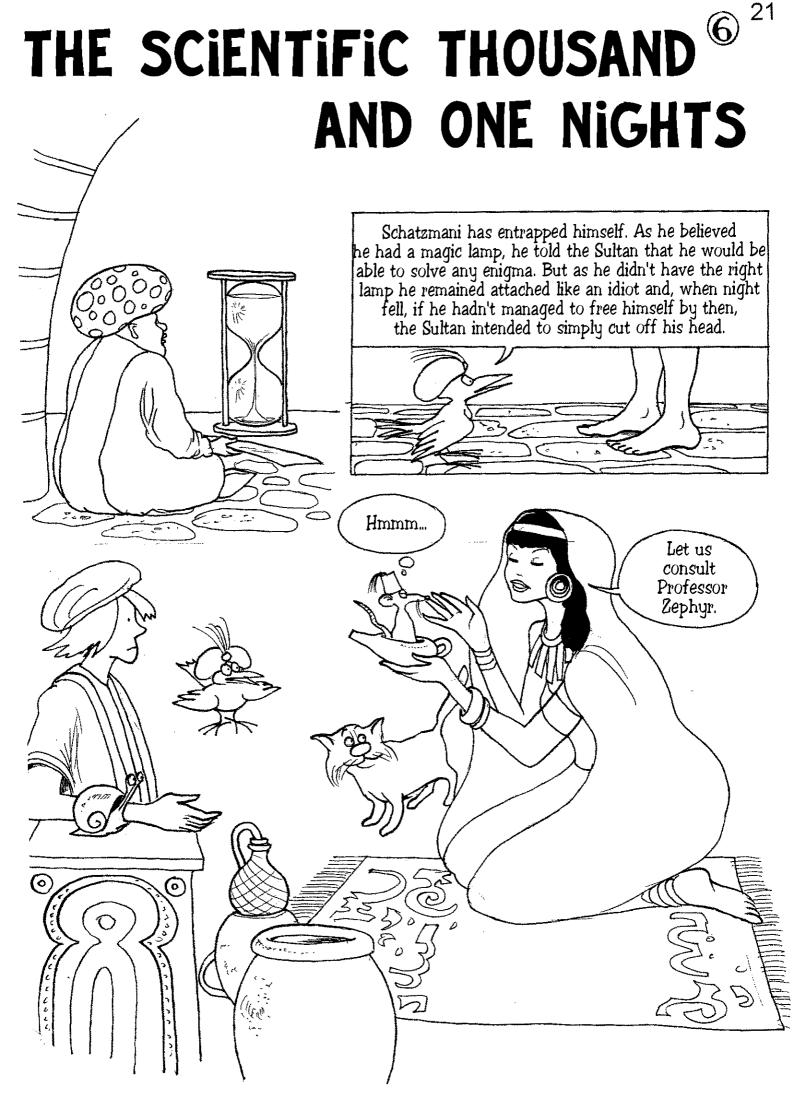


Huh? NOTHING! Yet I've been rubbing it for over an hour!

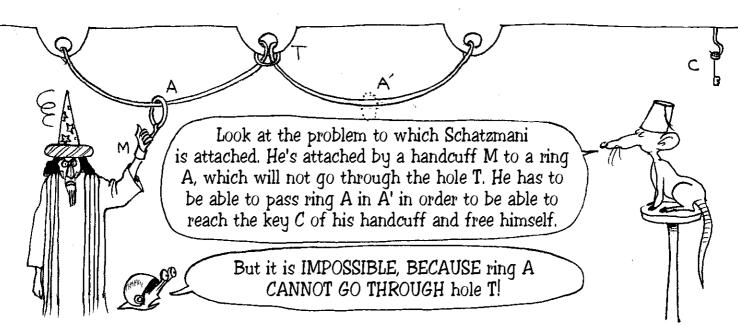


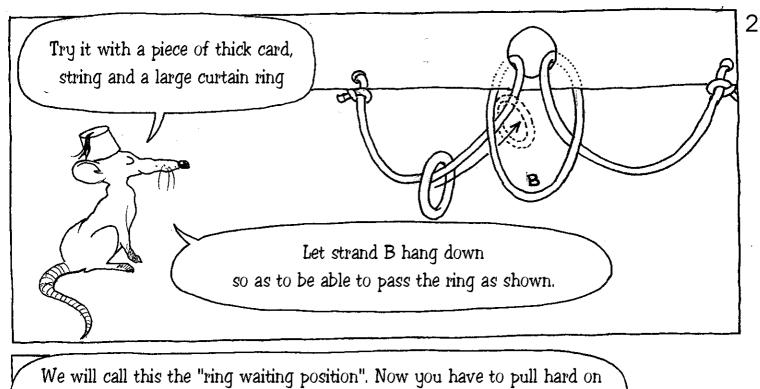


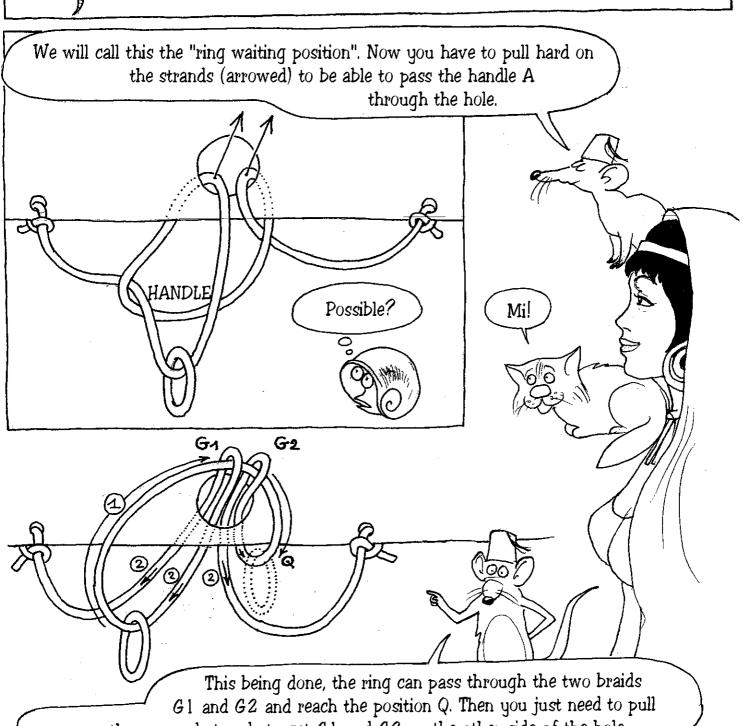
And yet this problem has a solution (see the next episode)



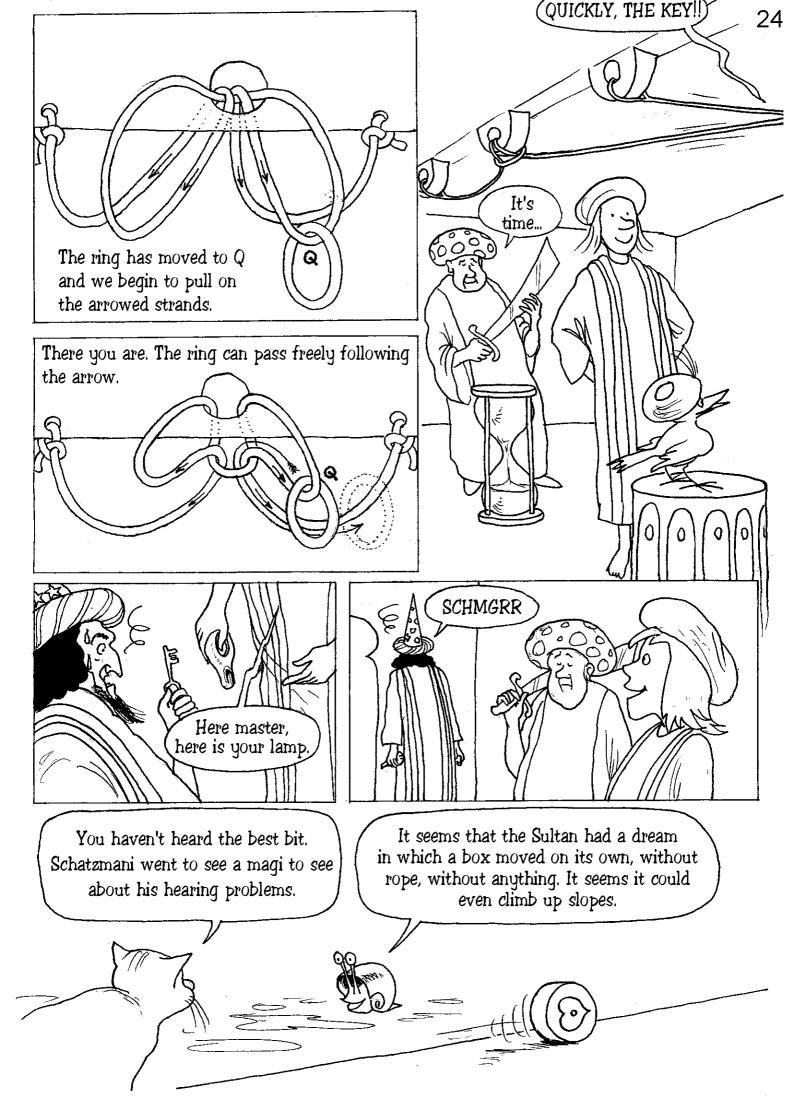






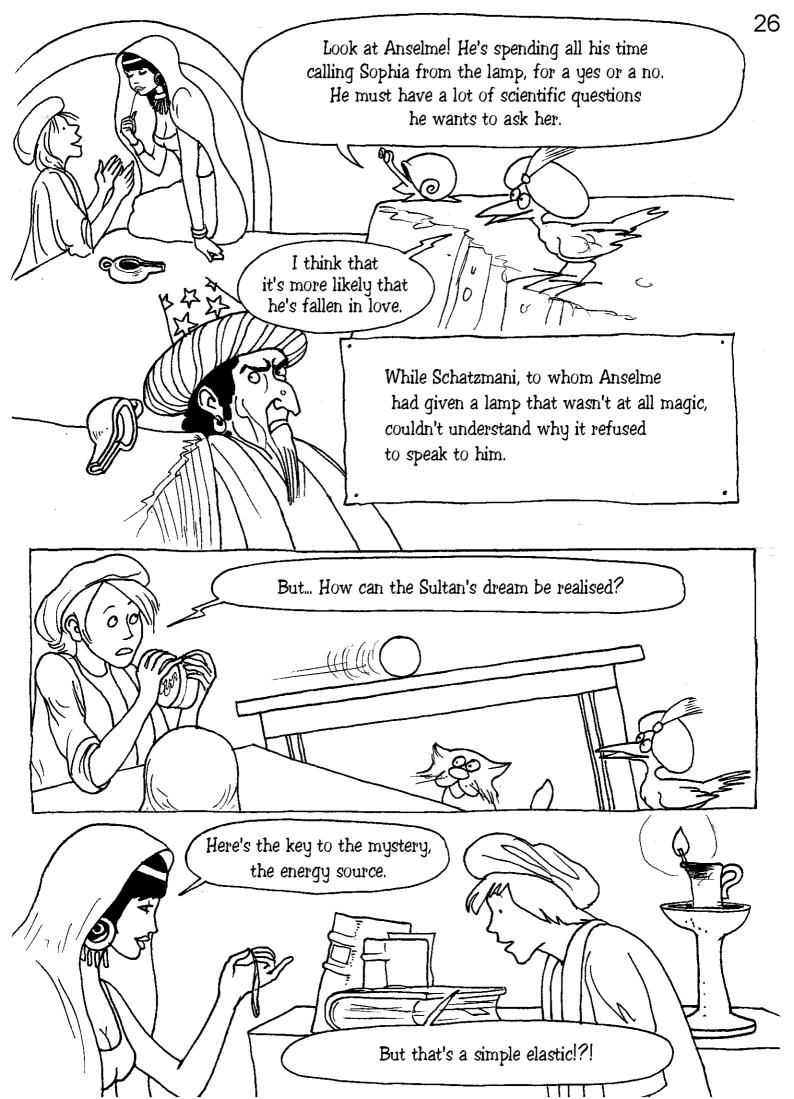


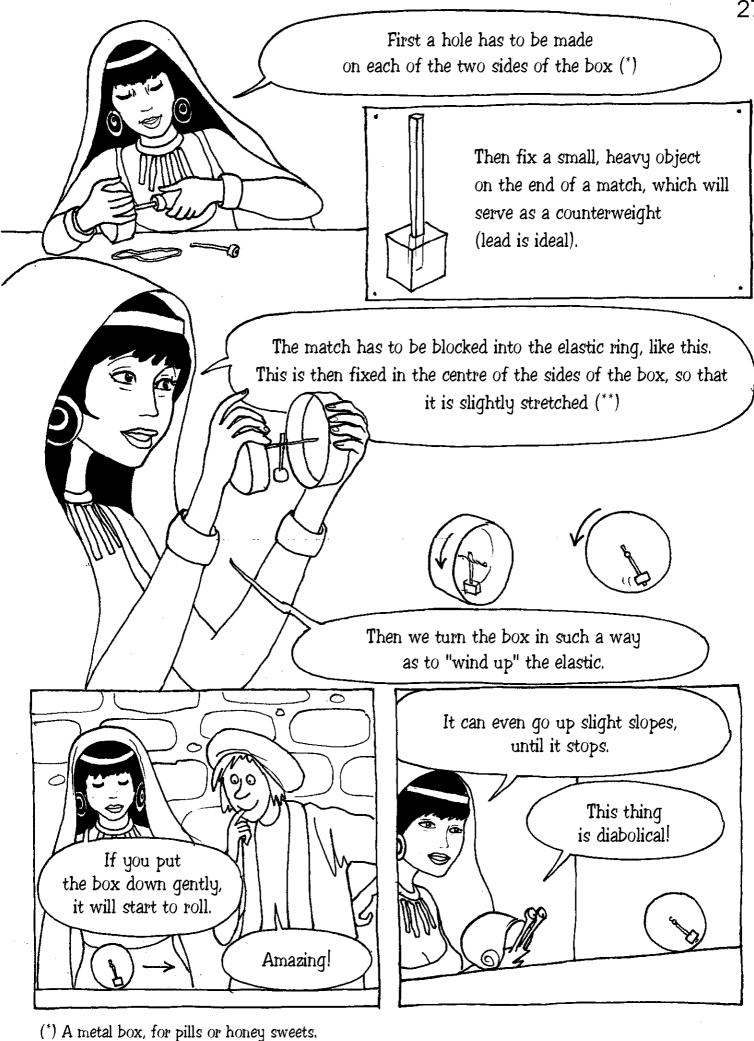
the arrowed strands to get G1 and G2 on the other side of the hole.



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(**) The elastic needs to be thin and supple!



(*) The Devil for Orientals.

THE SCIENTIFIC THOUSAND AND ONE NIGHTS

I've earned 5 bronze pieces thanks to all the ideas I've given to Schatzmani.



Listen Lord. You have one piece?

If you like you can win another.

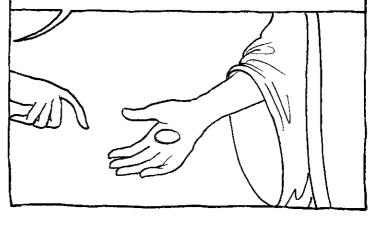


Ah, the money changer... What does he have to say?

You just need to play against me.
You're young, you're rapid.
You are certain to win.

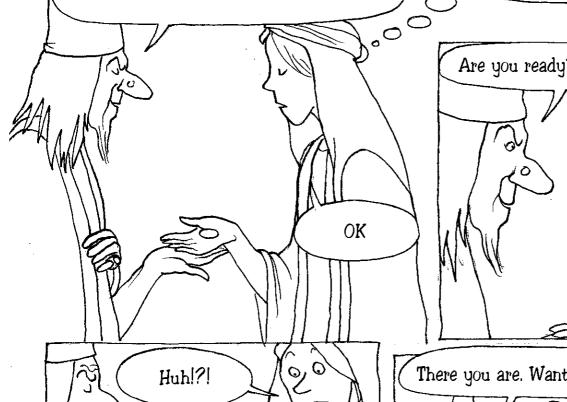


It's very simple, listen: take one of the coins and put it in your completely open hand, like this.



Now I put my hand just below yours, like this. You have to keep your hand completely open. If I manage to take the coin before you've closed your hand, it's mine, if not I'll give you another one.

His hand has a good distance to go to grab the coin, whereas I just need to fold my fingers. It's a stupid game and I should win easily.









He's already got three of my coins.

I need to understand this. Quick, the lamp.



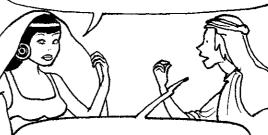


In my opinion it is all because the old fellow has the initiative. Your hand moves with a slight RESPONSE TIME. You need to see when his hand starts moving, then you give the order to yours to close.

That takes TIME.



It's a bit difficult to explain:
between your eye, your brain
and your hand, there are nerves,
where a NERVOUS INFLUX
travels at a finite speed.



So then, if I take the coin,
I'm the one who wins! I'm going
back to see the old man.





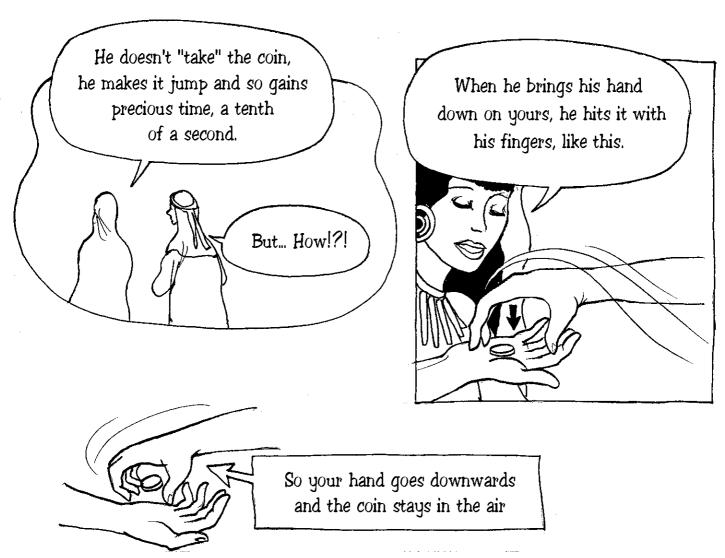
Sophia, I don't understand anymore.

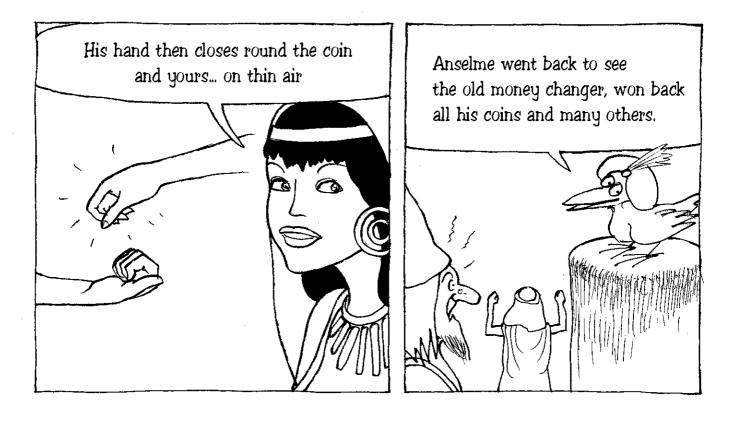
Is he really faster than I am?





No, but he has a very fast way of taking the coin. I've been watching him.



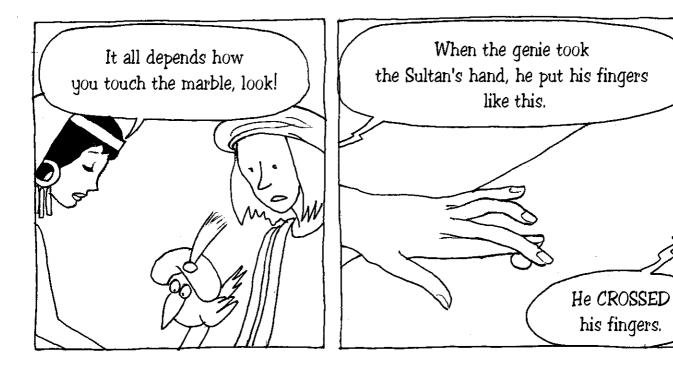


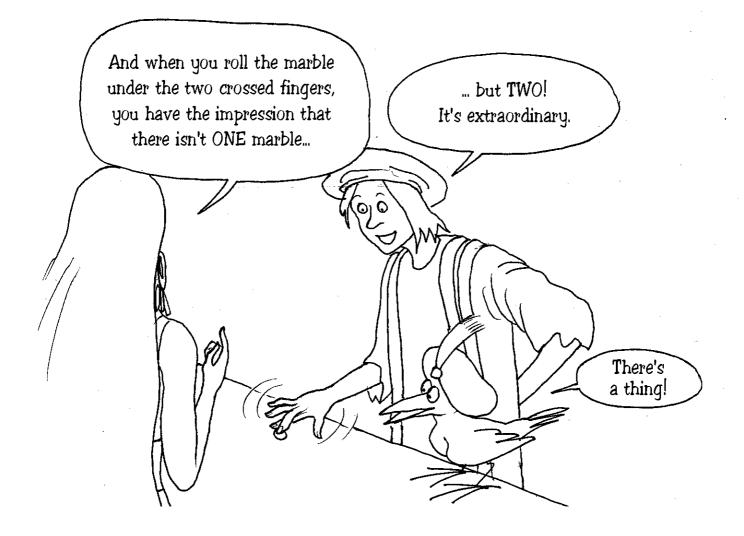
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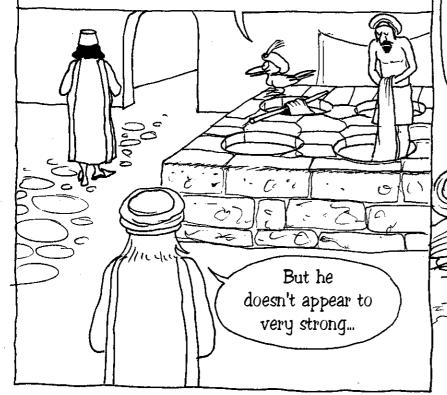




THE SCIENTIFIC THOUSAND AND ONE NIGHTS



He's just won a whole purse of gold given by the Sultan's very hand. In effect, he was able to do something that no man in the kingdom has been able to do since, even the strongest and most skilful.



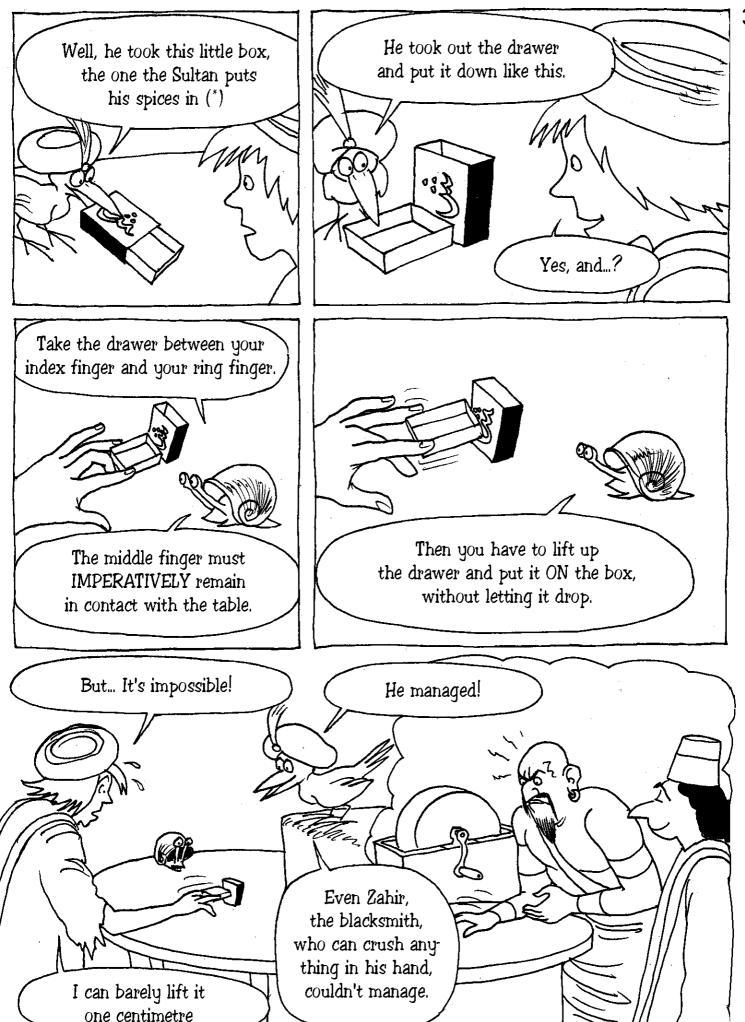
Look at that fellow, over there.

Schatzmani, when consulted, said that he must have concluded a pact with Chaytan (*) himself to be able to operate such a prodigy.

He said that he has "the Devil's hand"

The Devil's hand! What is this nonsense. Tell me...

(*) The Devil

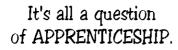


(*) A small box of matches.



But there has to be something because you manage and I can't.

Muscles work because of a NERVOUS INFLUX. And there you're sending it any old how. Carry on much more and they'll start to smoke.

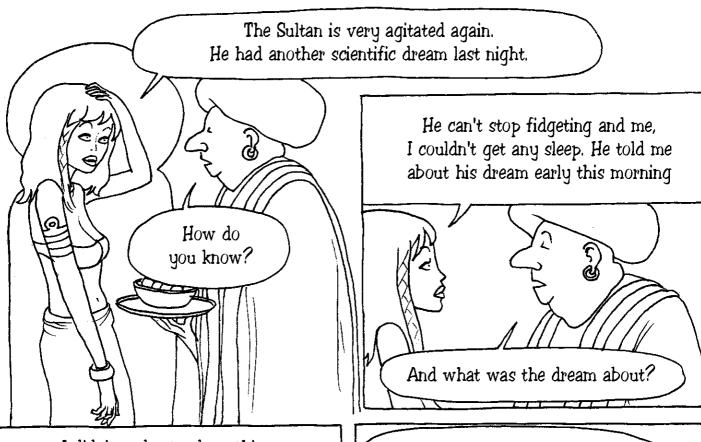




To succeed you have to learn to direct your nerve pulses towards the right circuits and coordinate them with your muscle actions.



THE SCIENTIFIC THOUSAND AND ONE NIGHTS



I didn't understand anything.

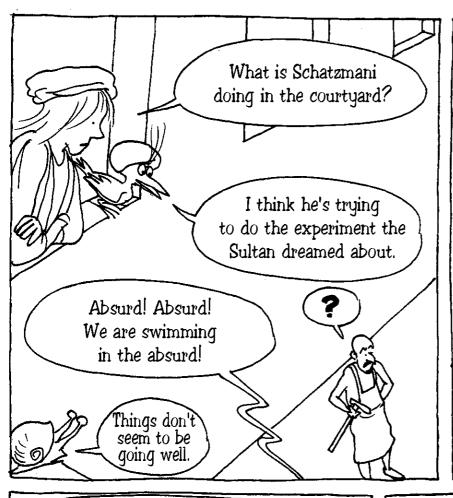
He said that "a man can lift himself up with his own weight". But I'm just one of the women of his harem, what do I know?



Each to their own speciality.

The Sultan's scientific fantasies, they're Schatzmani's business.









Let's see what old Schatzmani is getting up to, he seems to be deep in mechanical problems. I can see a rope, a pulley, weights...



The Sultan
said he saw a man in
his dream who could
lift himself with his
own weight and JUST
ONE PULLEY

O venerated Sultan, excuse me but there, I've cracked up. This experiment is impossible.

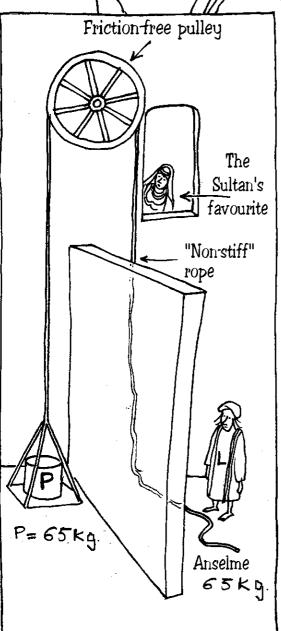
But because I tell you I saw it in a dream.

Light of the Orient, sovereign of Absurdistan, it isn't a member of the Science Academy that you need, it's a psychoanalyst. I prefer to resign. I've got a job as the Grand Inquisitor in the Science Academy of Fundamentalistan.

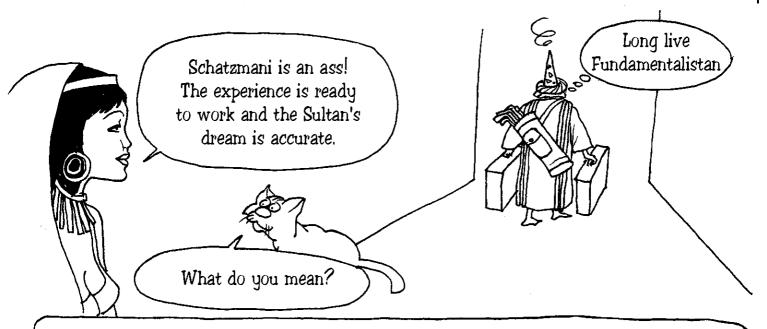
My hair has turned white and started to go frizzy because of all these problems. I'm fed up with these circumvolutions.

It's completely stupid. If P>L, then Anselme goes up. If P<L then it is the weight that goes up. But if P=L, nothing at all will happen! I'm going to become President of the Integristranal Physics Society, here it's a madhouse.





Can Anselme kiss the Sultan's favourite by going up the rope?



Anselme weighs 65kg. The counterweight too. When he exercises any sort of traction on the rope, and as the pulley produces no friction, the force is transmitted to the weight and... to himself, by virtue of the Action-Reaction principle. If the force is inferior or equal to 65kg, NOTHING will happen. Neither the counterweight nor Anselme will be lifted up. But, as soon as the force that Anselme exercises is superior, both will rise because they are submitted to an IDENTICAL force and they have the same MASS.

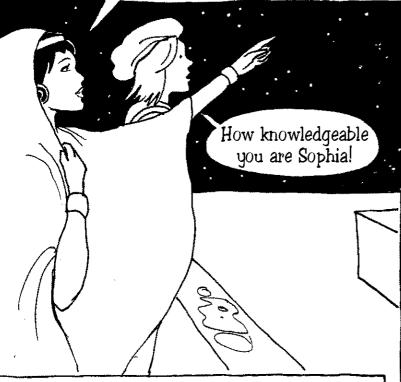


THE SCIENTIFIC THOUSAND 12 AND ONE NIGHTS

Night was falling on ABSURDISTAN.



Look at the stars in the sky. For centuries men believed that the more brilliant they were, the closer they were, whereas in fact, the brightest stars are young stars, very emissive and sometimes very distant.

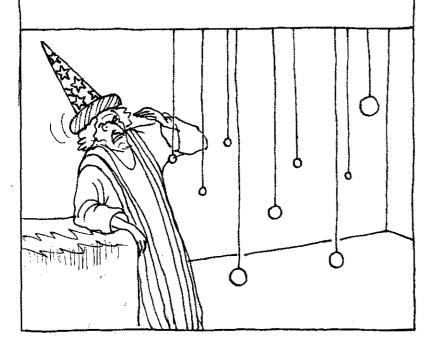


They also believed that the stars were at the same distance as the planets, that is to say at "millions of leagues". They gave themselves a false idea of the Cosmos.

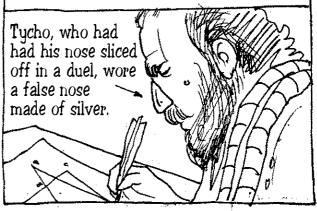


which they hung on to for a very long time.

So people like Schatzmani said that Earth COULD NOT move because, if that had been the case, the closest stars should move in relation to more distant stars, through a parallax effect.

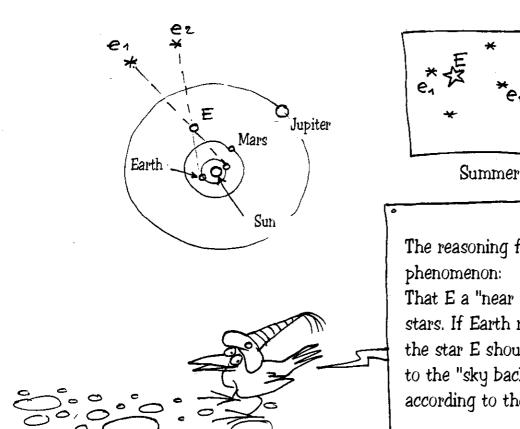


A Danish astronomer, Tycho Brahe, even showed "by calculation" that this idea of movement of Earth "does not resist analysis, because the vault of heaven is... immutable"!



∜*ez

Winter



The reasoning founded on the parallax phenomenon:

That E a "near star" and e_1 , e_2 , two distant stars. If Earth revolved around the Sun, the star E should project differently on to the "sky background" (stars e_1 and e_2) according to the seasons.

And that is exactly what happens in reality. But poor Tycho underestimated the distance of stars. If the solar system was the size of a dinar, the closest star would be at the edge of town. We had to wait until the nineteenth century and the invention of photography before Bessel was able to prove the phenomenon.

