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color changes depend upon light, temperature, excitement, and health.

The chameleon's neck is very short and thick and can be turned but little. In order that the chameleon may see above or behind without moving its neck, therefore, nature has given the little lizard a pair of swivel eyes, which it can roll around in all directions and which work independently of each other, so that it can actually look in two totally different places at once.

THE COBRA, THE MOST VENOMOUS SNAKE OF INDIA

Not the least interesting of the incorrect notions regarding reptiles centers about the celebrated snake-dance of India. Those who take part in this dance are a solemn Hindu and a number of captive cobras. The performance begins by the Hindu playing a strange refrain on the flute, as he sits cross-legged in the public square with his basket of snakes in front of him. Soon the music grows shriller and faster; the Hindu removes the cover from his basket and there appear the wicked heads of several of the cobra de capello, one of the most poisonous and vicious snakes in the world. The strange hoods on the serpents' necks are fully spread out, showing certain markings that look like a pair of spectacles, behind which eyes seem to peer at the crowd assembled for the exhibition. As the snakes rear their heads out of the basket the Hindu seemingly becomes frenzied. The strange tune from the flute becomes still shriller and “creepier”; the player's body sways rhythmically with the beat of the music, and in a moment more the snakes also begin to swing their bodies in time with the refrain. The keen, piping music, the swaying body of the player, the lithe, nodding, deadly snakes, rocking to and fro—these all make a spectacle which holds the crowd shuddering but fascinated. Every onlooker knows that in India not less than 25 persons die every day from the bite of this snake, and to their minds nothing but the charmed strains of the flute and the magical powers of the snakes' master keep the deadly reptiles harmlessly swaying within their baskets.

As a matter of fact the cobras are not charmed, either by the music or the man. No snake cares anything for music, and the flute-playing in the cobra dance is entirely for the benefit of the audience. The cobras rear up for the reason that that is the posture from which they strike, and they sway their bodies, not in time to the music, but in order to follow the movements of the flute-player. When the snake-charmer handles cobras he is taking great chances, and nothing protects him from being bitten but his courage and a thorough knowledge of snakes. Quite often the cobra's poison-fangs are pulled out before the dance begins, but this does not render the snake harmless, for poison flows from the wounds, and the remaining teeth might readily scratch the snake-charmer's skin enough to allow the poison to enter his blood.

SIMPLE EXPERIMENTS

BY ALEXANDER GRAHAM BELL

I. *Experiment with a Floating Candle* *

* Suggested by an experiment described in “Magical Experiments, or Science in Play,” by Arthur Good. Published by David McKay, 610 S. Washington Square, Philadelphia.

IF WE put a candle into water it will float on its side, like a piece of wood; but by sticking a few pins into the bottom we can make it float upright.

It is then sunk so deeply in the water that little more than the wick protrudes above the surface. Still, as the wick does project, we can light it and observe what happens as the flame burns down.

It is rather surprising to find that the candle continues floating, and burning, until it is almost entirely consumed. As the wick burns down, the candle floats up, until nothing remains save a mere stump of the candle with the pins sticking out below.

The explanation is not so obvious as appears at first sight.

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The candle becomes smaller, and therefore lighter, as it burns away, and it might be thought at first that this is the cause of the continuous flotation. A little reflection, however, will show that this cannot be the true explanation or the only cause involved.

The candle certainly becomes lighter; but does it become *specifically* lighter as it burns away, for the pins do not change in weight?

Here we have a constant load supported by the flotation of the candle; and why should it not fall when we burn away the support? The floating power surely diminishes as the candle becomes smaller in size, whereas the load remains the same. Does not the candle become specifically *heavier,* rather than lighter, as it burns away? If so, why then does it not sink?

The floating power was hardly more than sufficient in the first place to keep the wick out of water, and one would naturally suppose that any further reduction in the floating power, at least to any material extent, would send the whole thing to the bottom; but the candle continues to float, and burns to the very end.

2. *Experiment with a Candle too Heavy to Float*

If instead of trying a floating candle, as in the last experiment, we take one that will certainly sink, we get quite unexpected results.

A short piece of candle, say three or four inches in length, will not support the weight of a small coin. Do not take my word for it, but try the experiment yourself.

On the bottom of the candle, stick an American cent, or a silver ten-cent piece, and you will find that the candle will at once sink to the bottom when you put it in water, showing that it has not sufficient buoyancy to support the load.

Now take this loaded candle and stand it upright in a tumbler of water, with the top of the wick well above the surface. Light the wick and observe the results.

What will happen when the flame burns down to the level of the water?

One would naturally suppose that the flame would go out; but it does not. It continues burning; and, little by little, we become conscious of a clear space underneath the candle, showing that the coin is no longer in contact with the bottom of the glass. It soon becomes obvious that the candle is afloat.

As in the case of Experiment I, it continues to float, and to burn, until there is nothing left but a mere fragment with the coin attached.

If the candle was too heavy to float before it was lighted, why should it float afterwards? Has it not been growing specifically heavier all the time? If so, why should it continue to float? And why should the lighting of the candle make any difference in the result?

Flame is a very light substance, and the thought may very naturally occur that the flame, by its buoyancy, supported the candle, much as a little balloon would have done if attached to the wick.

This idea is very easily tested by repeating Experiment 2, and then, while the lighted candle is afloat, blowing out the flame.

If it was the presence of the flame that caused flotation, the candle would of course go to the bottom the moment the flame was put out; but it does not. It continues floating indefinitely after the flame has been extinguished.

The true explanation of the flotation of the candle is very easily reached by any intelligent person who will take the trouble to make the experiment himself and carefully exercise his powers of observation; but the problem is not so easily solved by merely reading about the experiment without trying it.