**We all know by now that our planet is in deep trouble. We have abused it horribly and we are paying the price. It’s time to try to do what we can, both as individuals and collectively, to find better and kinder ways to live.  It’s not our right; it’s our responsibility.  We are all guilty.  We can all change.**

# The collapsible plastic bottle - new Czech invention

[25-01-2005] By [Pavla Horáková](mailto:cr@radio.cz)

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One of the many things that took the Czech Republic after the fall of communism was the arrival of plastic bottles. Although there had already been a very efficient system of recycling glass bottles, plastic bottles swamped the country in no time. It took around a decade for recycling bins to appear in the streets. But often those who go to the trouble of finding the right bin, find it overflowing. Now two inventors from the city of Ostrava have decided to solve the perennial problem once and for all.

Let's admit it: although recycling plastic bottles may make us feel good, it is a hassle. First you have to remove all lids and labels, wash out the bottles and squash them. Until your next trip to the recycling bin, the empty bottles get in the way wherever you store them. With the revolutionary new bottle, designed by two inventors based in the North Moravian city of Ostrava, Oto Musalek and Josef Zboril, much of the nuisance goes away. Oto Musalek describes his initial idea.

"My idea was to make a bottle whose volume could be easily reduced. It was obvious that it should fold like an accordion. But the first prototypes did not work because of certain properties of the plastic, so I had to adjust the design of the bottle."

It took the inventors a year and a half to finalise the prototype which is now ready for mass production. They have also filed an international patent application. The trial product is a half-litre bottle but the parameters, such as the number of foldable ribs, can be altered for different bottle sizes. The inventors also gave some thought to the problem of bottle labels.

"If you remove the label from a regular bottle, some glue always remains on the plastic. That has to be removed at the sorting facilities using heat and polluting chemicals. So we designed a label that can be hooked around the neck of the bottle and then simply torn off. Also, it is made of paper which is easily recycled. So you end up with pure raw material which can be used to make a variety of end products, even new bottles."

So what do you do with the new bottle once you have drunk the contents? After unscrewing the cap and removing the label, you simply compress the empty bottle with a slight hand pressure on the upper part of the bottle. It folds neatly thanks to a complex system of ribs to produce a flat circle of plastic that doesn't take up more space than a powder compact.

And according to the inventor Oto Musalek, all that was inspired by a simple idea - not to regard used plastic bottles as waste but as precious raw material.

[](http://www.radio.cz/pictures/c/ekologie/pet_lahve3.jpg) [](http://www.radio.cz/pictures/c/ekologie/pet_lahve.jpg) [](http://www.radio.cz/pictures/c/ekologie/pet_lahve1.jpg)

**Pre-reading activities**

1. *Answer these questions.*
2. What do you do with used plastic bottles?
3. Are there enough plastic bottle recyclers in your neighbourhood?
4. Name the pluses and minuses of using of plastic bottle versus glass bottles.
5. *Try to explain the meaning of these expressions in English.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **collapsible plastic bottles** | **invention** | **to swamp** | **to overflow** | **perennial problem** |
| **hassle** | **initial idea** | **obvious** | **foldable rib** | **to alter** |
| **to be hooked around** | **pure raw material** | **although** | **nuisance** | **precious** |

1. *In the article find the synonyms.*
2. lid
3. trouble
4. invented
5. hassle
6. prototype
7. to remove
8. collapsible

**Reading activities**

1. *Answer these questions.*
2. Which are the most frequent problem caused by plastic bottles?
3. What is a possible way of solution in the Czech Republic?
4. Who are “the fathers” of the new, revolutionary idea?
5. Which problems did the inventors have to overcome?
6. How did they solve the problem of label removal?
7. *Match the words in the first line with those in the second one.*

Glass, efficient, recycling, perennial, initial, patent, foldable, bottle, polluting, raw

Problem, material, bins, system, idea, application, chemicals, bottle, label, ribs

*Complete the sentences logically.*

1. After the fall of communism the Czech Republic ………………..
2. It took almost a decade …………………
3. The inventors from Ostrava…………………
4. The revolutionary new bottle …………………
5. The inventor designed the label which ……………………
6. Plastic bottles are not considered waste any longer, ………………….

**Post-reading activities**

1. *Put down a 10-sentence summary of the article.*
2. *In groups prepare a promotional campaign of the new bottle to attract the attention of both supermarkets and consumers.*