Further, it is known that one of the technical problems presented by such storage spaces is that these devices are used for short durations, the components being introduced into or removed from the storage member as and when the user site requires them, which means that the storage modules are therefore opened and closed extremely often, sometimes several times per hour.

Although numerous devices of this type are currently available on the market, and even though there is an abundancy of literature relating to these devices (a study may notably be made of documents FR-2 877 641, EP-1 333 469, FR-2 803 647 or alternatively EP-1 102 713), the applicant company has set itself the task of proposing, through embodiments of the present invention, a novel device that may offers the following advantages and improvements:

- of simplifying existing systems in order to reduce the costs thereof;
- of allowing modularity (use of a single storage module or of several modules can be superposed, while at the same time offering the user the ability to use it as mobile equipment (for transporting the articles from a point A to a point B):
- of improving performance in relation to the existing systems;
- of maintaining an irreproachable level of safety under these conditions of simplicity and low cost.

As will be seen in greater detail in what follows, embodiments of the present invention provide ~~notable proposes, in one of its aspects,~~ a novel structure of storage modules that can create optimal and controlled circulation of the gas within the storage facility, notably avoiding circulation dead zones, and achieving this through the presence of a system of "shutters", each shutter being positioned facing one of the shelves, between one of

the walls of the module and the shelf in question, so as to prevent the gas from passing vertically at the location of a shutter and so as to allow the gas to pass only transversally along the shelf associated with the shutter in question.

An aspect of t~~T~~he present invention provides ~~therefore relates to~~ a device for storing articles in a controlled atmosphere, comprising:

- at least one storage module able to accommodate the articles that are to be stored; the storage module being equipped with at least one shelf ~~(preferably at least two shelves)~~ on which to position the articles;
- means for conveying gas into said module; and
- means for discharging the gas from the module,
- at least one of said storage modules being of substantially parallelepipedal shape and having two substantially vertical and opposite walls between which the shelves extend, and
- the means for conveying gas allowing the gas to be injected into the bottom part of the module or into the top part of the module, through one of the two said walls;

and characterized by the implementation of the following measures:

- the means for discharging the gas are situated:

i) on the same vertical wall as the means for conveying gas,

j) or alternatively on the other vertical wall facing it at the opposite end of the module through the fact that if the gas conveying means are situated at the bottom part of the module then the discharge means are situated at the top part of the module, whereas if the gas conveying means are situated at the top part of the module then the discharge means are situated at the bottom part of the module;

- the module comprises shutters, each shutter being positioned, facing one of the shelves, between one of the two walls and the shelf in question, so as

to prevent gas from passing vertically at the location of a shutter and so as to allow the gas to pass only transversally along the shelf associated with the shutter in question;

and characterized in that:

- if the storage module comprises just one shelf, then the storage module comprises just one shutter, situated facing the shelf, between the wall through which the gas arrives and the shelf,

- if the number of shelves in the module is an even number, ~~greater than one,~~ and if the means for discharging the gas are situated on the same wall as the means for conveying gas, ~~and if the number of shelves in the module is an even number,~~ then the last shelf of the module seen by the circulation of the gas between the conveying of the gas and the discharge of the gas from the module has no shutter.

According to some advantageous embodiments of the invention, this invention may adopt one or more of the following technical features:

- the shutter associated with a shelf is a mechanical component separate from the shelf in question itself, but secured to the shelf in question and extending all along the shelf in question;

- the shutter associated with a shelf is part of the shelf in question itself, by construction;

- the device comprises at least one technical module, contiguous with and secured to said storage module at one of the vertical walls thereof, in fluidic communication with this storage module said means for conveying gas allowing the gas to arrive in the technical module and thence be injected into the bottom part of the module or into the top part of the module, through the wall in common, whereas said means for discharging the gas are situated on the same wall as the means for conveying gas and allow the gas to be discharged from the storage module to the technical module and thence to the outside;