CLAIMS

1. A storage frame for cylinders of pressurized fluid, comprising a primary structure and at least one storage box, the storage box comprising least one cylinder of pressurized fluid extending along a longitudinal axis between two ends, said storage box being mounted in the primary structure and comprising at least one first retaining member configured to collaborate fixedly with one end of the at least one cylinder and blocking the rotation of the cylinder, and at least one second retaining member configured to collaborate with the other end of the cylinder, characterized in that the second retaining member is configured to maintain the position the relevant end of the cylinder while at the same time exhibiting at least one determined degree of freedom, and in that the storage box forms, in the primary structure, a unit assembly of cylinder(s) fixed firmly at one end and floatingly at the other end, which means to say that there is no firm mechanical connection at one end of each cylinder so as to allow each cylinder a longitudinal movement in its region of retention making it possible to absorb the expansion of the volume of the cylinder notably as it is being filled.

2. The frame as claimed in claim 1, characterized in that the storage box comprising at least one first plate extending in a first direction, the first plate comprising at least one passage orifice configured to accept, in the mounted position, at least part of that end of the cylinder that is referred to as the “first end” which collaborates with the first retaining member, the other end which collaborates with the second retaining member being referred to as the “second end”.

3. The frame as claimed in claim 2, in which the storage box comprises several passage orifices equipping the first plate and configured to each accept the first end of each cylinder mounted or intended to be mounted in the storage box, the passage orifices being arranged on the first plate a regular or irregular distance apart.

4. The frame as claimed in claim 2 or 3, in which the first plate is equipped with the first retaining member of the storage box, said first retaining member being configured to collaborate with a collar equipping the first end of the cylinder.

5. The frame as claimed in claim 4, in which the at least one first retaining member exhibits an internal screw thread configured to collaborate with an external screw thread formed on the collar of the first end of the cylinder.

6. The frame as claimed in any one of claims 2 to 5, comprising at least one second plate extending in the first direction and positioned facing the first plate from a determined distance.

7. The frame as claimed in claim 6, comprising a second retaining member corresponding to a passage orifice made in the second plate and configured to at least partially accept the second end of the cylinder.

8. The frame as claimed in claim 6 or 7, comprising several retaining members corresponding to passage orifices made in the second plate and configured to each accept the second end of each cylinder mounted in the storage box, said retaining members being arranged a regular or irregular distance apart.

9. The frame as claimed in claim 8, in which each passage orifice of the plurality of the second plate is configured to collaborate, through having a complementary shape, with the second end of each cylinder.

10. The frame as claimed in any one of claims 6 to 9, comprising an immobilizing device configured to connect the first plate to the second plate while at the same time exhibiting at least one degree of freedom.

11. The frame as claimed in claim 10, in which the immobilizing device comprises at least one screw/nut assembly extending in a direction substantially perpendicular to the direction in which the first plate and the second plate extend.

12. The frame as claimed in claim 11, in which the screw/nut assembly passes through the first plate and the second plate.

13. The frame as claimed in any one of claims 6 to 12, in which the storage box is fixed to the primary structure by means of at least one fixed mechanical connection at the level of the second plate and by means of at least one mobile mechanical connection at the level of the first plate.

14. The frame as claimed in claim 13, characterized in that the at least one fixed mechanical connection immobilizes the storage box on the primary structure in all three directions in space.

15. The frame as claimed in claim 13 or 14, characterized in that the at least one mobile mechanical connection immobilizes the storage box on the primary structure in the two directions of the plane of the first plate while at the same time allowing limited axial travel in the third direction in space which is parallel to the longitudinal axis of the cylinders.

16. The frame as claimed in any one of claims 6 to 15, in which the primary structure of the frame comprises at least one wedging element intended to accept the second end of at least one cylinder so that, in the mounted position, the second end of each cylinder rests on a wedging element of the primary structure.