I'll be referring the thing as PbOFSD.

PbOFSD has the ability to store fluid at pressure.

View

Fig. 1, Fig. 2 and Fig. 3 give the labeled 3d view of the (possibly) most basic form of PbOFSD at various angles and in an 'inflated' state, that is PbOFSD is at it's optimal capacity of fluid storage.

Fig. 2 and Fig. 3 focus towards the 'top' side of PbOFSD, that is the section which does not form its base; where as Fig. 3 give a perspective of the 'bottom' side, the place from where it rests on earth (on the gray cylinder).

Fig. 4 give the orthographic x-y view of PbOFSD, Fig. 5 the bottom view and Fig. 6 the top view.

Component description -

1 – Colored brown, this is basically a mass which is responsible for the accumulation of pressure in the fluid, since this is a mass, it will have a weight due to gravity and this weight will be used to create the pressure. This component moves up and down along the y axis with the increase and fall in amount of fluid left in PBoFSD respectively. It might even contain outlet/inlet pipes to fill PbOFSD. This mass needs to be balanced so as to not fall as the the arrangement increases/decreases in height; the various ways to do so has been discussed later. Fig. 6 shows the detailed view of this component.

2 – This blue colored material forms a sealed 'bag' in which the fluid is stored, this is made of a material which is plastic in property (like polythene or paper), that is it deforms with ease and can be bought back to it's original shape with ease. The lesser the force applied to deform it, more applicable is the material for application in PbOFSD. Apart from it's plastic property, it should be able to withstand the pressure gained by the fluid and should not dissolve/react with the fluid inside it. Also it should, depending on the requirement, withstand frequent deformation or at least have a reasonable limit for the number of times it can be deformed before it breaks. There will be multiple outlets in this bag depending on the requirements. Fig. 1, Fig. 2, Fig. 3 and Fig. 4 show the view of this component at it's maximum inflated state in various angles.

3 – This forms the base of the of the tank and has been colored gray, this can take virtually infinite shapes and sizes depending primarily on the space constrains, but it should be able to bear the weight of 1, 2 and the fluid contained in 2. It might contain

input/output pipes to fill 2 with the desired fluid. Fig. 5 give a 2-d view of this component.

None of the components needs to be necessarily cylindrical, various forms and it's requisites has been discussed later.

Construction -

The construction will be explained with respect to the most basic form of PbOFSD as in Fig. 1, Fig. 2, Fig. 3, Fig. 4, Fig. 5, Fig. 6.

The shape of component 2 can take two forms, as shown in Fig. 10 and 9, that is it can be open from the top and/or bottom or closed from both/one end; notice, the inner side of 2 is colored light green. If 2 is decided to be made open from any one or both end, it should be ensured that component 1 and 3 (corresponding to the end which is open) are attached to 2 such that it does not result is any undesired fluid leak.

As sated before, component 1 should be placed such that it is balanced even as it moves about the y axis, since it has to, this is a requirement.

1 can be placed on 2 such that it remains balanced; since this is very unlikely to happen cause of the plastic property of 2, it's recommend to give 1 support of a mechanical structure, for example in Fig. 11 where 2 rods are places with a gap in the middle who's dimensions are corresponding to the wheels which are inserted in them, the arrangement is such that the wheel rolls on the depression of the rod, not allowing 1 to fall towards either of the 2 possible axes. Fig. 12 give the detailed view of 1 of the 2 structures as shown in Fig. 11.

Working -

Since 1 has a weight, and 2 is a plastic material, all weight of 1 falls on the fluid which is in confinement of 2, creating a pressure in it, this pressurized fluid can be withdrawn using a pipe which might be constructed preferably on 1 or 3, but it can be on 2 itself, same can be said about the pipe though which fluid will enter; if the weights are not taken off 2, the input fluid needs to be at such a pressure so as to lift 1, thus it stores energy and this energy is used to get the pressurized fluid as output.

As the amount of fluid remaining in PbOFSD decreases, 2 crumbles, thus if 2 deforms easily, the force required to deform it will be less, increasing the efficiency of the arrangement.

Various possibilities and modifications -

Instead of a placing a weight, 1 can simply act as a solid plane on which force is applied to create pressure, thus eliminating the weight; the force can be caused by preferably, though constrains force spring(s) if pressure is desired to be independent of the amount of fluid left in PbOFSD.

In extreme cases, that is when pressure is very high such that it's not the ability of a material to withstand it, an external container can be used (Fig. 15, 13 shows a yellow colored transparent container) to reduce 2's probability of failure, but still there will be a few sections of 2 (towards the lower end of this container) which will not get it's support.

Fig. 14 shows a detailed view of the container's end, it can be seen that 3 has been reduced in diameter to allow the container to move over it (shown in Fig. 16, 17, 18) as fluid level in PbOFSD decreases and 2 crumbles.

This thing can also be used as a practical pump...that has not been explained for now.