A Review paper on newest awareness about See-Saw Water Pumping System

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***Abstract*—** Saving energy used in the pumping of water by using the playful energy of the children. It is an innovative idea to pump the water from the bore well or rainwater harvesting tank to the water tanks above the ground level using the energy created by the playful energy of the children's while playing on the see-saw. There is a rule of our mother nature that energy is neither created nor destroyed, also in this innovative idea the playful energy of the children is converted into another form of energy which will help us to pump the water and saves a lot of energy used before for pumping the water.

Keyword: Play ground, Sustainable, Hand pump, See saw.

I. INTRODUCTION

The Pump Seesaw may be a multi-functional seesaw combining 2 H2O pumps, designed particularly for kids living in a section bereft of water. By wiggling with the Pump Seesaw, kids will draw water simply and cheerfully. In a section wanting water, like Africa and therefore the geographic region, kids invariably assume the task of obtaining water from an overseas public pump. without doubt the exertions may be a significant burden for his or her very little bodies. Utilizing leverage principle, the Pump Seesaw will work because the handle of the normal ground pump, driving the plunger up and down. Thus, water are often drawn simply by wiggling with the seesaw.[1]

The Ministry of Human Resource and Development (MHRD) needs to rapidly increase its training initiatives. In order to see real impact, trainings should be held at least twice a year wherein the second time, school development plans should be reviewed and grievances redressed. Also, at least 50 percent of the committee members must be trained, as against 2 from each school's committee now.

II. LITERATURE REVIEW

A lot progress has been created in the globe regarding this plan of property energy production. A few ideas that have already been enforced within the universe square measure as below:

a) Apples wind turbine

A traditional turbine takes wind as associate degree input and provides out electricity. Since the wind turbines suppose however weather changes, the wind turbines suffer as a result of their unskillfulness to turn out power. Apple stepped up from their usual competition of natural philosophy and smart phones and in 2011 filed a patent for harnessing energy from the wind turbines even while not the wind. They projected a plan wherever they claimed convert move energy into heat energy and so ultimately into electrical. It consists of a 'Low capability Fluid', which stores thermal energy from the friction between the shaft connected to the blades and the low capacity fluid and could be consumed in times of full activity of winds. [8][9]

b) Oregon wave buoys

Oregon could be a state within the geographic region on the geographical area of the United States wherever a company known as "Ocean Power Technologies" put in ten buoys with terribly long shafts called a "Spar" and a "Ballast" accustomed stabilize the structure from the incoming waves. These buoys oscillate vertically as a result of of the waves that in flip feed the generator and ultimately all of this is often fed to the close grid station.[11]

c) Oscillating water column

Waves from the ocean are one thing that do not stop manufacturing themselves at any given time. The wave energy is one of the foremost consistent sort of energy ascertained twelve months a year, around the clock. This conjointly makes it the supply of 1 of the highest potentials of energy supply. If each wave energy is controlled from the ocean, it can be enough to supply electricity to forty you look after homes worldwide. Wave Power Stations build use of an internal chamber with a gap at the bottom permits water to get inside the channel. Due to the compression and decompression of air within the chamber, the rotary engine within the closed in chamber rotates and so manufacturing helpful energy. The mechanism is such it rotates in one direction solely.[10]

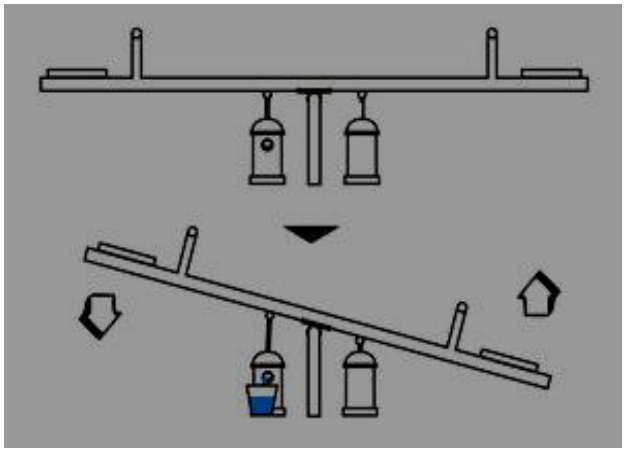
III. APPLICATION

This idea has a wide range of application as it can be implemented at various places and can be used for many purposes like,

- It can be implemented in the schools mainly where children can pump the water which can be used in water coolers, washroom, for cleaning and gardening such that the school will be clean and green.
- It can be implemented in the public parks where children can play with it and the water can be used at the water coolers, washroom and in making the park greener.
- It can be installed at the places where there is shortage of water as its maintenance is less.
- It can also be used in relief camps for drinking water.
- It can also be used to replace the old pumping system at various places.
- Relief campus for drinking

4. Working

This See-Saw will be a little different from the normal ones as in this the capacity of the children of sitting will be for a total of 6-12 children because for pumping the water up a continuous momentum have to be created which can only be created by heavy motions. So, the more children will create more momentum which will easily pump the water to the tanks above the ground level. There are many designs for the see-saw to use it for pumping and each of them has something better and bad both. It's working can be explained as,



In the shown diagram, there are two hand pumps attached to the see-saw such that when the children's from the one side pushes it upwards then the handle of the hand pump goes up from that side while the handle attached to the other side goes down and this process continues in a loop of up & down creating the sufficient momentum to pump the water to the tanks above the ground level. This is the basic working principle of pumping water with the help of see-saw.[2]The biggest challenge that the school faced was to convince the parents of these kids. They were apprehensive and didn't want to send their children to school. Another challenge was to find enthusiastic teachers. *"Because it is not a regular school we wanted to make sure that teachers are actually interested in doing it.*

IV. COST AND MAINTENANCE

This is easy to install and safe to use, this system has low maintenance cost and can be installed on the ground near any hand pump or in remote areas. Its cost is not very high and it is an only one-time investment as there is no need to provide electricity or any other energy to run, it will run without any wastage of energy.

V. ADVANTAGES

This idea will not only pump the water without wasting energy but will also help in many ways.

- This will save the cost of the pumping motor and its electricity charges.
- This idea will give a good message to the children about saving energy as our natural resources are getting less by time.
- The water pumped by them can be used in many ways like drinking purposes, in washrooms, and also for gardening such that their surroundings will be clean and green.
- The water pumping will be converted into fun and ease.
- It will help in the increasing attendance of the children's in the school.
- Also, with the advancement of technology day by day the younger generation is not physically active as all of the things can be done within a room with the help of the latest technology. But this idea will also attract them to play outdoor games and do some physical efforts which are good for their health and growth.
- It can be convenient for used in remote access area.

VI. CONCLUSION

There is a major need of this innovative see-saw to be implemented due to two major reasons,

- Day by day, our natural resources are getting lesser which is a major problem as according to the calculations our future generations will not get enough resources for their livelihood. So, we have to save the natural resource for them and to do this we have to do every possible thing to save energy.
- Another reason is that with time we are getting more advanced in technology as now we can do almost everything by sitting only with the help of the latest technologies. But not only these advancements are helping us but also harming us. As now the younger generations spend all of their time playing video games, etc. They don't do any physical activities like before and it is not good for their health & growth. But this type of invention can help them by making the older boring process into fun.

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