



## “A review on pendulum pump”

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of providing free power is used to operate the pendulum of pendulum pump instead of using finger to swing the

**Abstract** —The effect of creating the free energy in the device made of:

a)Oscillating pendulum-lever system,  
b) system for initiating and maintaining the oscillation of the Pendulum. Free energy stands for charging the battery with vehicle when the vehicle runs for use. This paper reviews briefly the researches one on pendulum pumps which lift the water from the source. Different means of operating the pendulum are investigated. When we are in the rural areas where electricity availability is limited so to operate a regular pump [become difficult .Therefore a hand water pump is the solution. but the effort of human beings has also some restriction that gives rise to the pendulum pump. To increase the efficiency of pendulum pump a source of power is provided which is available naturally i.e. by means of solar, wind or battery which is charged easily by means of operating vehicle.(Two wheeler bike etc).

Key word: - Free Energy, Battery, and means of battery charging.

### **Introduction: -**

A hand water pump is a best solution to lift the water without use of electricity. But it requires large human effort which is not feasible for a long time. When we need to supply the water continuously it is not the permanent solution to lift the water continuously. So Hand water pump with a pendulum is a very simple solution for pumping water instead of using the hand pump. It provides alleviation of work, because it is enough to move the pendulum occasionally

with a little finger to pump the water, instead of large swings. Work is alleviated because easier, long-lasting and Effortless use of the hand water pump has been enabled. To increase the efficiency of the pendulum and avoid the interface of human being continuously a means

pendulum pump.

A battery is used to give power to the pendulum. The battery is charged by means of bike which we drive when necessary for personal work. Means no need to drive the vehicle specially for charging the battery. Thus it gives maximum discharge than a finger operated pendulum pump. So we have other option to charge the battery i.e by solar, by wind etc.

### **Literature review:-**

CARL A. KUEHN, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented new and useful Improvements in Pendulum-Power Pumps is a pumping apparatus It is an apparatus in which the power to operate the pump is derived from a pendulum spring-motor. His invention is to provide a simple practical means for economically operating deep-well and other pumps in a country where there may be very little wind or a limited amount of fuel for power purposes. [1]

In order to indicate when the power has run down, he provides a suitable signal which is operated through the medium of the spring itself, or by other suitable connections with the machine. This signal mechanism is preferably electrically operated, and accordingly the spring is placed in an electrical circuit with an insulated conducting post arranged in the path of the spring, as the latter is expanded radially; the post being connected with one terminal of the circuit and the spring with the other. This circuit is interrupted at all times except when the spring is run down and has expanded until it comes in contact with the insulated post. As soon as the contact is made between these two parts they operate after the



fashion of a push-button to close the circuit and ring the bell, which indicates to the farmer that his power is run down and needs re-winding. [3]

A two stage oscillator is a pendulum pump in which two pendulums are used called a compound pendulum. Where the energy of one pendulum is transferred to pendulum. The information given by author represents the possibility of using this mechanism in real life world. In the year 1999, sir, Veljko Milkovic invented two stage Oscillator pump. [2]

Case study: - Vehicle (2-Wheeler) Battery Operated Pendulum Pump

In the rural areas there are facilities like artificial pond; lakes etc and also government provide schemes for developing such areas for irrigation. But in some places of villages there is availability of water but shortage of electricity. To overcome this shortage of electricity for operating pump concept of pendulum pump was introduced which is operated manually. But as it require high manual effort so it is not feasible. Now introduced a vehicle battery operated pendulum pump.

Vehicle battery operated pendulum pump is the pump in which concept of free energy is used. i.e the energy required for charging the battery is used from the vehicle itself when we run the vehicle for personal use. No need to run the vehicle only for charging the battery. At once the battery is charged pump can be run for 3-4 hours by using the battery. Thus human being efforts are reduced.

Also we can charge battery by using Solar system arrangement or wind mill concept to charge the battery.

A battery operated pendulum pump consists of reciprocating pump, flywheel mechanism, pendulum attached to flywheel through linkages, pedestal bearings, ball bearings for frictionless operation of pump.

Power supply is given by a 12volt battery which is assembled on vehicle to the DC WIPER Motor. As the DC MOTOR starts rotating it give a jerk to the pendulum through linkages which causes the pendulum to oscillate. This oscillating motion is given to flywheel mechanism through linkages. Flywheel are so designed that the power is magnified by the flywheel mechanism by taking advantage of gravity. The piston rod of reciprocating pump is connected to flywheel mechanism causing reciprocating motion of piston resulting in suction and discharge. In this way the MOTORIZED PENDULUM PUMP operates efficiently and effectively.

The advantage of pumps is,

In this, linkages are used so it reduces human efforts also Installation and maintenance cost is comparatively low. Its Use is simple and convenient.

Conclusion: - Finally it is concluded that battery operated pendulum pump is the best alternative used to lift the water from canal, lakes, and ponds for irrigation purpose over the manually operated pendulum pump. Also the efforts of human beings are reduced and after charging

the battery pump can run continuously for at least 3 hours. As there is no need of electricity to charge the battery, thus concept of free energy satisfies.

#### **Future Scope:-**

Alternatives are possible for Charging of battery by wind or solar.

#### **References:-**

Two-Stage Mechanical Oscillator page on Veljko Milkovic's website.

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