Abstract: The air jet propelled rotator comprises of a hydraulic system (1), a pressure generating unit (7), wherein air pressure is generated using a series of mechanical foot pumps (10, 11), a pressure accumulating unit (16), the air stored in the pressure accumulating chamber is released continuously with a high speed through an air jet (18, 19, 20) to rotate a turbine (22) thereby converting mechanical energy to kinetic energy. The turbine is connected to a gear box (24) containing two gears (25, 26) of different sizes in order to increase the rotation of the axle of the rotator.
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
This invention relates to the technique of driving a rotator using air pressure and generates electricity using this device.

The present device is designed in such a manner that the air is accumulated to operate air jets without consumption of any fuel or electricity from any external source whatsoever.

The main objective of the present invention is the conversion of energy from mechanical energy of air jets to kinetic energy. It will be appropriate to say that the present device is so designed as to harness air to do some mechanical work. Prior to this invention there had been claim in conversion of mechanical energy to kinetic energy in different ways i.e. by the designing of various systems by different inventors. The driving of any rotator requires an input in the nature of electric energy.

Here in this invention the rotator is driven by air pressure and the air pressure is created and accumulated manually or by an electric motor. The said process is new and inventive and no prior art has been reported to the inventor. However, problems of fuel and electricity consumption can be overcome by the present invention as it requires only air, which is easily and abundantly available in the nature, free of cost as raw material for the operation of this invention. The present invention can be used twenty four hours round the clock at any height, any depth, (such as mines), any temperature and humidity. There is no vibration made, on working of this inventive system. No heat is produced from this inventive device hence no coolant is required.

The wear and tear of this invented device is almost negligible, so is the cost of the maintenance and no suspension of operation of this device is required for maintenance.

The present invention has innumerable advantages as it is eco friendly, it does not
require burning of any fuel or any chemical reaction thereby causing pollution to the environment. The present invention does not produce any biological or non biological waste or any byproducts as smoke or foul smell. Further the components of the present device are easily available in the market. Being its portability and compatibility it can be efficiently used for the domestic, commercial and transportation purposes or navigating a ship or boat. The inventive system can be directly used for threshing of food grains. If attached to an alternator it can be readily source of power generation. By using this device to rotate an alternator it can produce electricity, a lot many problem in the field power generation can be solved.

ABSTRACT

The air jet propelled rotator comprises of a hydraulic system (1), a pressure generating unit (7), wherein air pressure is generated using a series of mechanical foot pumps (10,11), a pressure accumulating unit (16), the air stored in the pressure accumulating unit is released continuously with a high speed through an air jet (18,19,20) to rotate a turbine (22) thereby converting mechanical energy to kinetic energy. The turbine is connected to a gear box (24) containing two gears (25,26) of different sizes in order to increase the rotation of the axle of the rotator.

Description of the invention

The entire system for driving a rotator using air pressure of the invention can be categorized in the following sub divisions:

a. a hydraulic system;

b. an air pressure-generating unit;

c. an air pressure accumulating chamber;
d. a turbine;
e. a gear box consisting of two gears of different sizes.

a. The hydraulic system is provided with hydraulic chamber, two levers at one end and couple of arms driving series of foot pumps. The mechanical operation of the two levers generates hydraulic fluid pressures in the hydraulic chamber. The other end of the hydraulic system is provided with a electric motor, which substitutly functions, same as, the levers generating fluid pressure in the hydraulic chamber. The output source of air pressure of the hydraulic chamber created by levers or by the electric motor drives the hydraulic arms.

b. Both the ends of the hydraulic arm are attached simultaneously with a linear iron rod, to a series of foot pumps arranged in a linear fashion in two rows. The output duct of the each of the foot pumps is led to a common collecting duct. The huge amount of air generated by the foot pumps is led to an air pressure accumulating chamber through this common collecting duct.

c. Both the ends of the hydraulic arms are attached simultaneously with an iron rod to which paddles of a series of foot pumps are attached. The foot pumps are arranged in a linear fashion. The output ducts of each the foot pumps are led to a common collecting duct, which delivers the entire air so generated, in the pressure accumulating chamber.

d. The turbine is designed and aligned at the terminal end of the air ejecting jets hitting the receptor of the turbine. The turbine is the unique specimen of the invention of the inventor. The construction of the turbine includes a wheel of 1.25 diameters, to which glasses made up of steel are attached circumferentially at regular interval of 10 cm, in order
to prevent the dissipation of air pressure and proper utilization of maximum air pressure.

e. The centre of the turbine is provided with an end of the axle. The distal end of the axle is attached centrally to one of the bigger gear present in the gear box. The gear box consists of two gears. The first gear is 6-12 times bigger than the smaller gear. The bigger gear is so aligned with the small gear in the gear box that it touches the smaller gear tangentially giving enough compatibility for its free and fast rotation. The smaller gear is provided with an axle, which acts as an output junction of the entire invention.

2. The present invention operates when, the levers attached to the hydraulic system, are mechanically operated to and fro or through a electric motor, which results in the operation of the hydraulic arms.

3. Both the ends of the hydraulic arms are attached to linear rods which are simultaneously attached to the pedals of the series of the 96 foot pumps arranged in the linear fashion in two rows in the air pressure generating unit.

4. The simultaneous pressing of series of foot pumps releases air from the respective out put duct of each foot pumps. Each duct of the of foot pumps is led to a common duct. Thus a huge amount of air is created by the continuous working of the foot pumps and the air is accumulated in the air pressure accumulating chamber.

5. The distal end of the duct originating from the pressure accumulating chamber is fitted with three air ejecting jets. The air ejecting jets are nozzles with minute adjustable openings, so that the air gushes out of these jets with tremendous speed. That is to say that the air pressure stored in the pressure accumulating unit is released through multiple air ejecting jets. Thus, the pressure-accumulating unit continuously releases
a quantity of air in a high speed by means of air jets, the air released in
the high speed forms a spraying flow to rotate a turbine, and the turbine
thereby creates a better rotating effect. The rotation per minute (rpm) of
turbine reaches to 250.

6. The turbine is especially designed for the present invention and
comprises of a wheel of 1.25 meter of diameter, to which (18) eighteen
steel glasses are placed tangentially, these steel glasses acts as an air
receptor for the turbine. The steel glasses are attached in the entire
circumference of the wheel at regular interval of about 10 cm. The
turbine is attached centrally with an axle, which gains its momentum
with the rotation of the turbine. The initial inertia of the turbine wheel is
broken by rotating it manually. During manual rotation air jet nozzles
are opened. The other end of the axle terminates into the gear box. This
end of the axle is attached to a gear centrally as is attached to the turbine
on the proximal end. The rotation of the turbine axle rotates the bigger
gear in the gear box.

The gear box consists of two gears; the first gear is bigger than the
smaller gear and is aligned tangentially to each other so the rotation of
the bigger gear stimulates the rotation of the smaller gear. The smaller
gear is provided with an axle at the centre. As a consequence of which
the axle attached to the smaller gear starts rotating faster than the bigger
gear. The other end of this axle is protruded out of the gear box, acting
as output terminal of this invention. The dimensions of the objects used
in the present invention are so adjusted that the output terminal of this
device rotates at 1500 rpm (rotation per minute). This terminal output
can be attached to an alternator thereby generating AC current. A part of
the electric power so generated that is 7.5 KW is used for the operation
of the hydraulic arm as giving current to the electric motor to maintain
running of the entire air jet propelled rotator system making it a self operating system; after suitable amount of energy consumption, an object of sustaining electric generation by the mode of converting of energy can be realized.

7. The present invention will be apparent in its structure combination after reading the detailed description of the preferred embodiment thereof in reference to the accompanying drawings.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[01] FIG. 1 is a perspective view structurally showing the appearance of a preferred embodiment of the present invention;

[02] FIG. 2 is a perspective view structurally showing the appearance of an air pressure generating unit and air pressure accumulating unit of the present invention;

[03] FIG. 3 is a perspective view structurally showing the appearance of a turbine of the present invention;

[04] FIG. 4 is a perspective view showing the structure of the gear box of the air jet propelled rotator system of the present invention;

[05] FIG. 5 is a perspective view showing the structure of a pressure-accumulating chamber, the turbine and the gear box of the present invention;

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

[001] Referring to FIGS. 1 showing the structural combination of the system for air jet propelled rotator of the present invention, the entire system is basically composed of a hydraulic system (1), an air pressure
generating unit (7), an air pressure accumulating chamber (16), a turbine with air receptor (22) and a gear box (24);

[002] Referring to FIGS. 2, the pressure generating unit (7) is used for the generation of the air with adequate pressure and amount; it consists of a hydraulic arm (8) both the ends of the hydraulic arm are connected with the linear iron rod (9, 10). These linear rods (9, 10) are attached with the pedals of the foot pumps (11, 12) arranged linearly in series in two rows on both sides. The respective output duct (13, 14) of the foot pumps are collectively led to a common duct (15). In the present embodiment the to and fro motion of the hydraulic arm (8) initiates the simultaneous pressing of the pedals of the series of foot pumps (11, 12) consequently releasing huge amount of air from the foot pumps. The air so generated by the foot pumps are collected in a common duct (15) through the respective duct (13, 14) emanating from each foot pump. The common collecting duct (15) terminates into cylinder like reservoir called air pressure accumulating chamber (16) wherein the air is stored with adequate pressure. The posterior end of the air pressure accumulating chamber (16) is connected with a pipe (17), which distribute into three parts connecting with jets (18, 19, 20). These jets are meant for ejecting air with a very high pressure.

[003] Referring to FIG. 3, the turbine (22) of the present invention comprises of two parts:

i) a wheel; and

ii) an air receptor (21).

The wheel is a normal spherical object having grooves in the centre so that the axle (23) can be attached to it. The diameter of the wheel is about 1.25 meter. On the entire circumference of the wheel a number of
18 glasses made up of steel (21) are fixed, which acts as air receptor, tangentially at regular interval of 10 cm. The high speed spraying of air by virtue of air jets (18,19,20) causes the rotation of the turbine. The air jets (18,19,20) are aligned at 30 degrees to the air receptor (21) of the turbine (22) the air receptor (21) prevents the dissipation of air pressure and air is pressure is utilized in the rotation of the turbine (22). The rotation of the turbine (22) consequently, rotates the axle attached to it, as the axle (23) is grooved centrally with the turbine (22).

[004] Referring to FIG. 4, the gear box (24) consisting of two gears (25,26) works on the principle of gear shifting mechanism. The two gears (25,26) in the gear box, are of different sizes, the first gear (25) is larger in diameter than the second one (26). The first gear (25) is attached centrally to the terminal end of the axle (23), the other end of which is centrally attached to the turbine (22). The first gear (25) touches tangentially to the smaller gear (26). In operation, when the turbines rotates, it result into the rotation of axle, which in turn rotates the first gear (25) and as the first gear touches the smaller gear (26) it initiates the rotation of the smaller gear, thereby increasing the rotation of the smaller gear. The smaller gear is attached centrally to another separate axle (27) which acts as the output junction of the device.

[005] Referring to FIG. 5, the pressure accumulating chamber (16) is a cylindrical container meant for the storage air with high pressure, the anterior end of which receives the terminal end of the common collector duct (15). The posterior end of the pressure accumulating chamber (16) is attached with a pipe (17) which is further bifurcated into multiple divisions, the terminal end of these divisions is fitted with the air ejecting jets (18,19,20). The air stored in the pressure accumulating chamber (16) is released with high speed by air ejecting jets (18, 19, 20) for
rotating the turbine (22) at the air receptor (21), the turbine is attached centrally with the anterior end of the axle (23). As a result of rotation of the turbine (22) the axle also rotates with the speed of the turbine. The posterior end of the axle (23) is attached centrally to the first gear (25) of the gear box (24). The rotation of the axle (23) results into the rotation of the first gear (25) which stimulates the rotation of smaller gear (26) as it touches the smaller gear (26) tangentially. The smaller gear (26) is provided with a separate axle (27) protruded outside the gear box. Thus, with the gear shifting mechanism the axle (27) which is the output junction of the device starts rotating.
CLAIMS

I claim,

1. That the inventor has designed a system comprising of various foot pumps to collect huge amount of ambient air at time in a air pressure accumulating chamber(16), the air stored in the pressure accumulating chamber is released continuously with a high speed through air jets (18,19,20) to rotate a turbine (22). The turbine is connected to a gear box (24) containing two gears (25, 26) of different sizes in order to increase the rotation of the axle of the rotator. The rotator can be used in many ways.

2. The system for air jet propelled rotator as in claim 1, wherein: said air pressure generating unit is provided with a hydraulic chamber, hydraulic arms pressing series of foot pumps. The said hydraulic system is attached to a hydraulic chamber with two levers which when manually pressed creates pressure and drives the hydraulic arms. The hydraulic arms, on to and fro movement presses the foot pumps filing the pressure accumulating chamber with air. The air released from it drives the turbine.

3. The system for air jet propelled rotator as in claim land 2, wherein: said hydraulic arms are attached to the linear rods where foot pumps paddles are attached in a linear fashion, releasing air simultaneously from each foot pumps at a time, wherein: said number of pressurizing pumps can be altered according to the load and capacity of the rotator required.

4. The system for air jet propelled rotator as in claim 1, wherein: said air stored in pressure accumulating chamber is released through multiple
adjustable jets, and the air hits the turbine's receptors and drives the turbine.

5. The system for air jet propelled rotator as in claim 4, wherein: said turbine is having receptors on its circumference at regular intervals receiving air pressure through-adjustable air jets.

6. The system for air jet propelled-rotator as in claim 1, wherein: said turbine is fitted with an axle rotating the gears in the gearbox running the rotator.

7. The system for air jet propelled rotator substantially herein as described with reference to the drawings accompanying this specification.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

INV. F03G7/10 ... 340-2040, Tel 31 651 epo nl, Fax (+31-70) 340-3016
DE Rooij, M

Form PCT/ISA/S10 (second sheet) (April 2008)

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F036 F03D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<td>column 1, line 16 - line 46; figure 2 column 2, line 20 - line 35</td>
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Date of the actual completion of the international search 29 June 2006

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