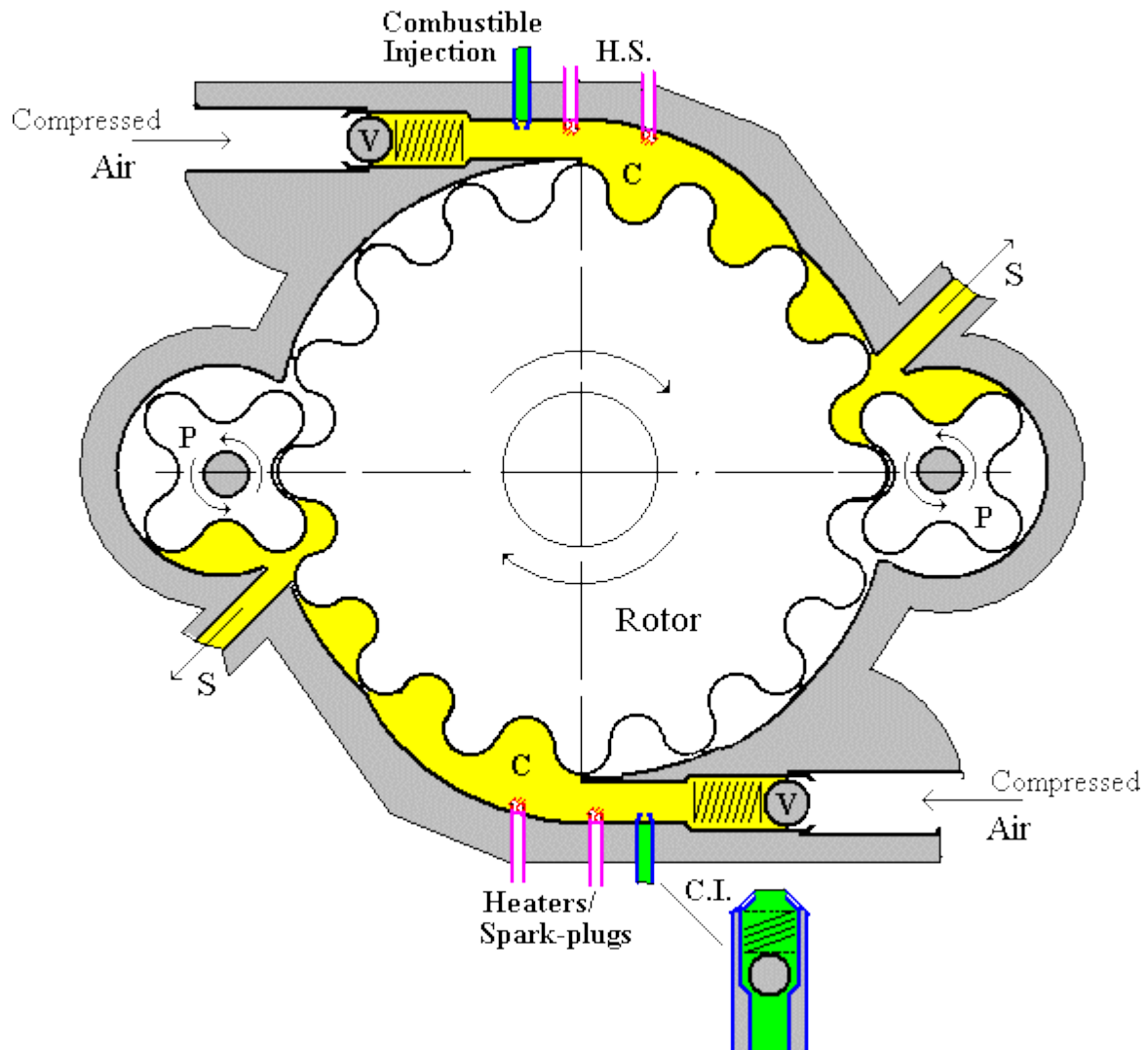


Rotary Engine

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Code of Author

The present invention, whose publication date is detailed above, it is liberated by the author's desire being able to use for any study or application, included the development and commercialization of the same, and alone subjected to the conservation of the invention name and to the author name, and in the case of being marketed, to the compensation to its author to testimonial title of 1% of the marketed value in concept of use and economic exploit of inventions.

Description and elements

The present system in a motor of rotation of very simple structure consists, in which, systems of revolving gears inside a shell are used as base that serves at the same time as explosion shell. As I have said, its structure is so simple that it is enough a simple look to the descriptive drawing to understand its basic operation.

The main elements of the motor are:

- Shell that contains the support gears (P) and the rotor gear (rotor). Likewise this shell forms one or two holes or lateral chambers where the explosion or combustion of gases that impel the rotor is carried out.
- A valve (V) of entrance of the compressed air for each explosion chamber, which will close when the explosion takes place and during the time that there is high pressure in the chamber.
- Injector/s of combustible.
- Heating and/or spark plugs to facilitate the combustion or explosion of the combustible gases.
- Besides we have the entrance of the compressed air and the exits or escapes (S) of the combustion gases.

Operation

This rotation motor can work as explosion or combustion motor depending on the different parameters that we apply, as pressure of the compressed air of entrance, of the applied combustible, etc.

The operation, for example for the combustion, it is the following one:

The compressed air impels and opens the entrance valve (V) and it begins of filling the combustion chamber. When the chamber is full with air (or during its filled) the combustible is injected mixing with the air, and so, the combustion takes place (helping by heaters or spark plugs if it is necessary).

The combustion of gases produces a great pressure inside the chamber, which closes the valves of combustible and injector and this pressure makes rotate the rotor.

When the turning rotor expels the gases and the pressure get lower in the chamber, the valve (V) opens up again and the cycle goes repeating it.

As you can see, with alone an appropriate mechanical adjustment, you can get that the motor rotates automatically (turbine type) being managed in its turn with the contribution of the appropriate quantity of fuel only. The situation of the injector of fuel and the heaters or spark plugs and their possible coordination with the turn motor depend on the ignition type and pressure that we use.

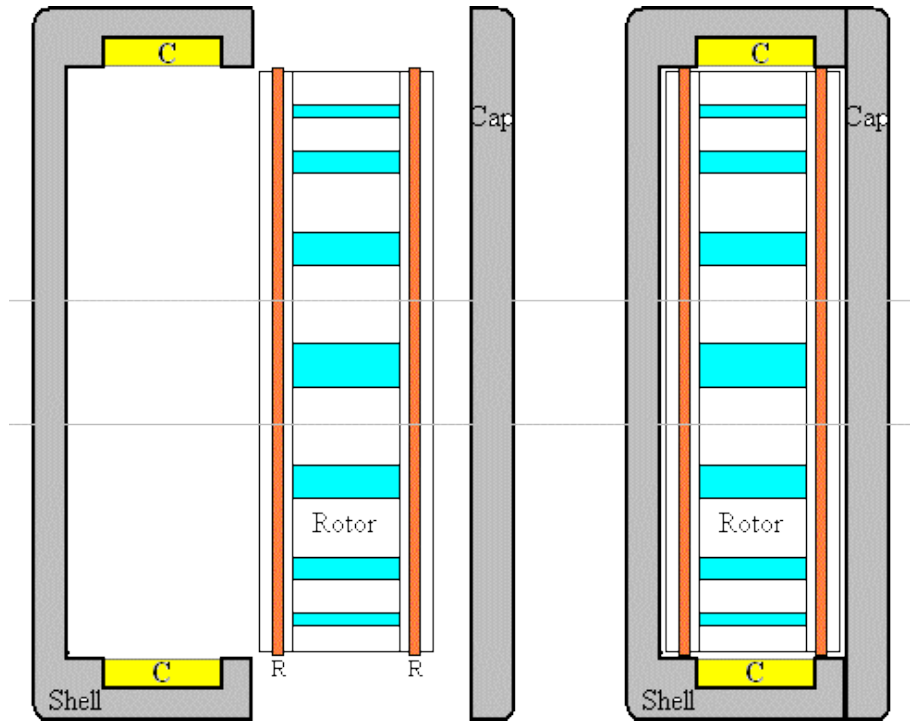
The appropriate synchronization of the injector aperture, which can be regulated with the rotor turning, is another consideration to take in mind.

Likewise it can be convenient to put in the air compressor a valve of return between the high pressure of exit and the entrance at the same one with object of impeding some too high pressures to the motor entrance or any blockade due to this pressure.

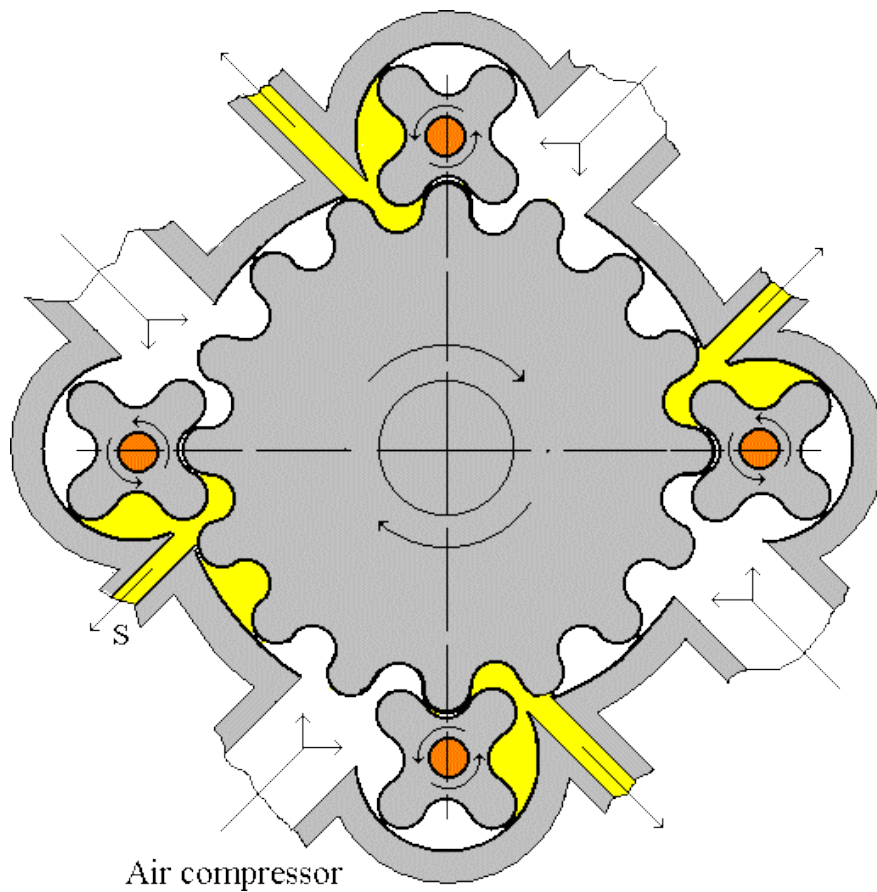
As we see, to get the rotor turn we use the principle of the pulley, in which the force is applied alone on a lateral of the same one (rotor) to get the lever effect on the rotor axis.

Pieces

Lateral view of a motor module



Compresor of air

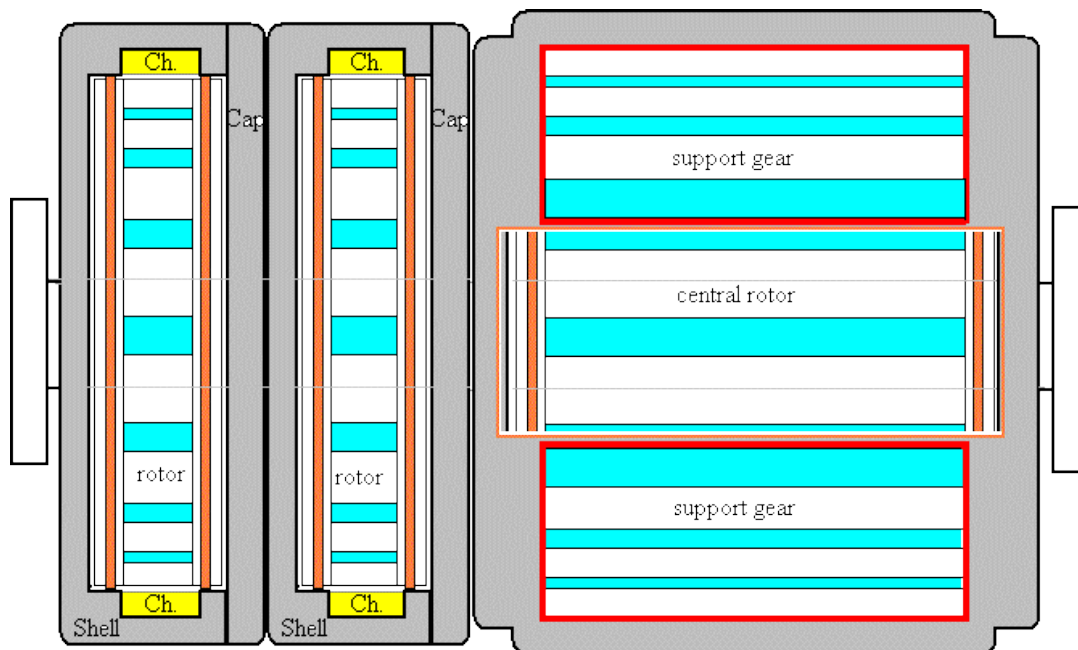


As we see this motor needs have compressed air for its work.

So as the diversity of compressors it is very extensive, it can use the one that the maker wants. Nevertheless, as a compressor is required, I give my model that has similar principles to those of the motor.

As we can see in the drawing, this model in a central gear and several satellite gears that make of compressors of air when rotating consists. In this model you can adjust the different dimensions and parameters as they are the number of gears, longitude of battle of the compressor, speed of turn of the gears, etc. to obtain the flow and compression of air that is required.

Dimensions and characteristics



Motor modules -----Compressor

According to my calculation, this motor type would be very compact and of low dimensions. An equivalent motor to a cylinder capacity (flow of air by two rotor turns) of 8000 c/c. with two motor modules and four combustion chambers, it could have dimensions next to 20 cm. of diameter for 25 cm. long, including compressor and motor only.

On the other hand, this model can have till four times more combustions per time unit (in two modules with four chambers) than the current ones, and so, it is possible to get much power in smaller motors.

Use

As we can see this motor type can transform the expansion force of gases in rotational movement, so this way, this model can be used so much in explosion and combustion engines as in any other type of chemical reaction that produces emission of gases, which can be used for the rotor turn.

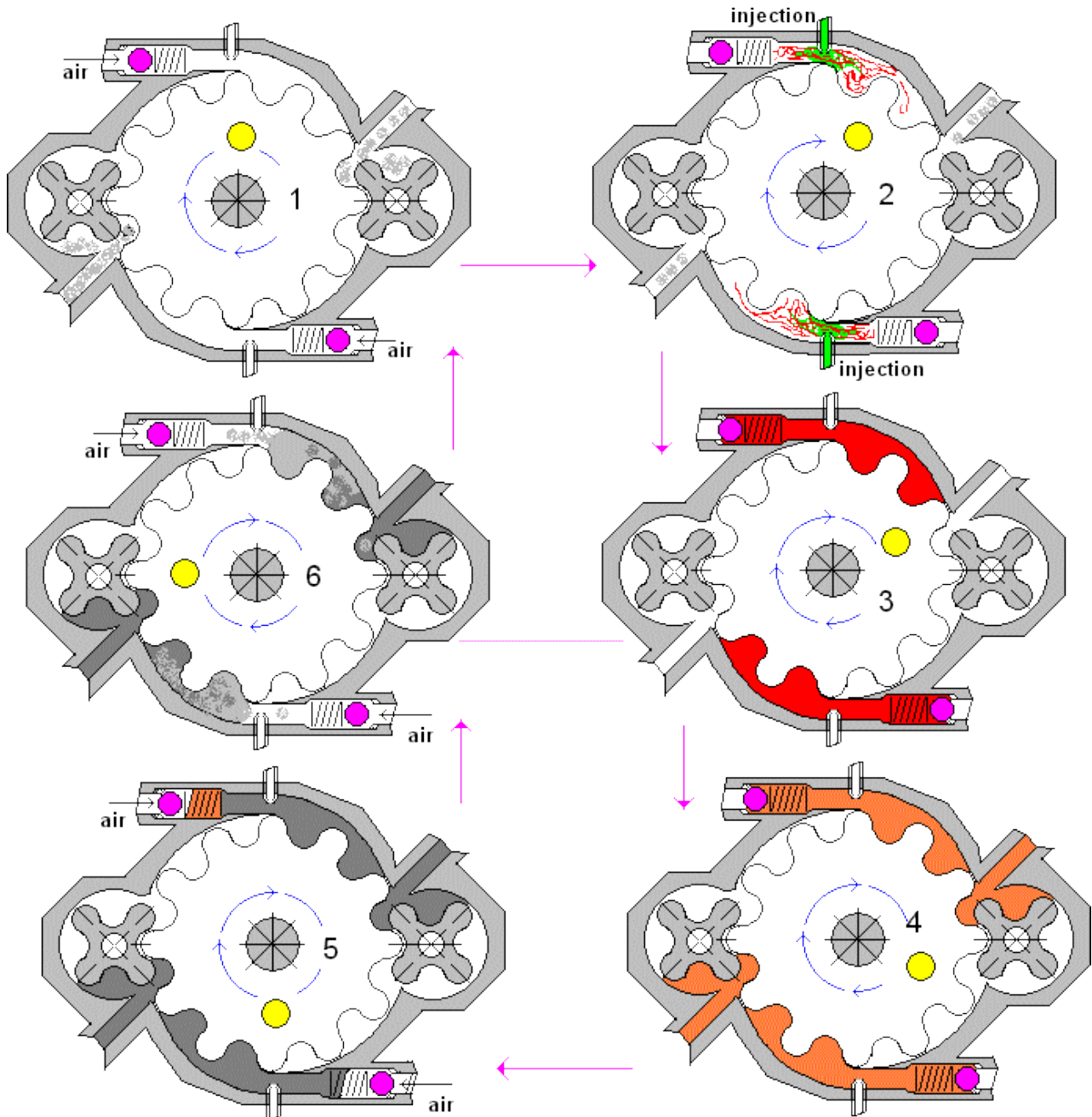
--In the same sense, it is possible the use of this gears system in method of transmission by means of liquid or gasses, which go from an impulse pump until the rotors in the wheels of the automobiles. In this case the change power-speed is gotten by the load in the pump of impulse, as it is exposed in my patent on this question: Hydraulic transmission

Other use

This system of gears that is used for this rotary engine can also be used for other forms of getting rotational movements by means of pressure.

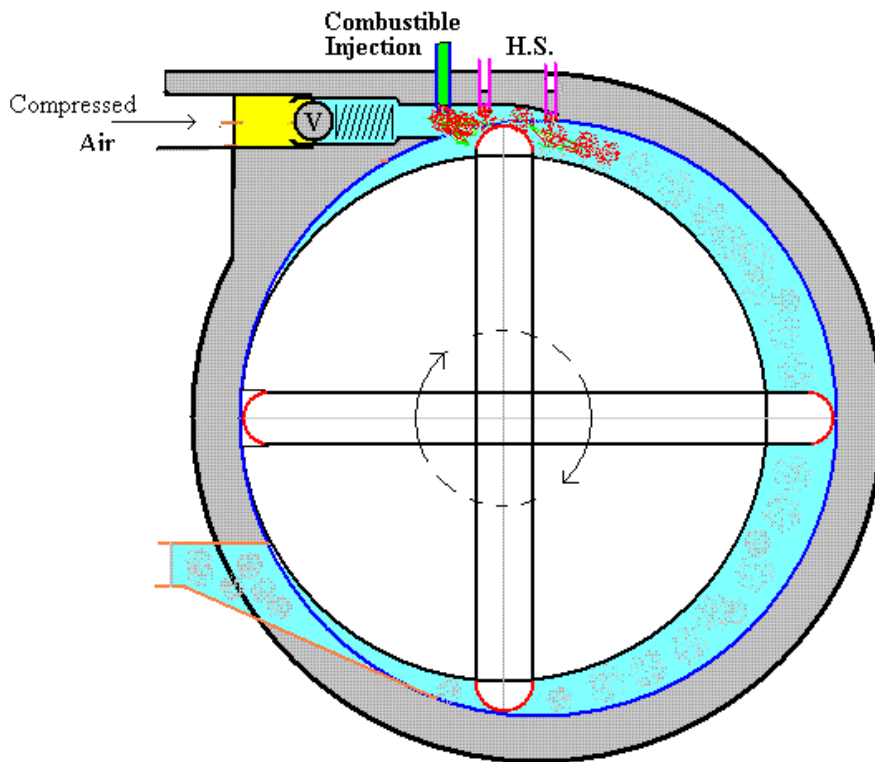
For example, it could be useful in the electric power production for pressure in water, because although its yield for time would be smaller than in turbines, however, its yield for volume of water is very bigger for what can be used when the water is scarce.

Development---performance

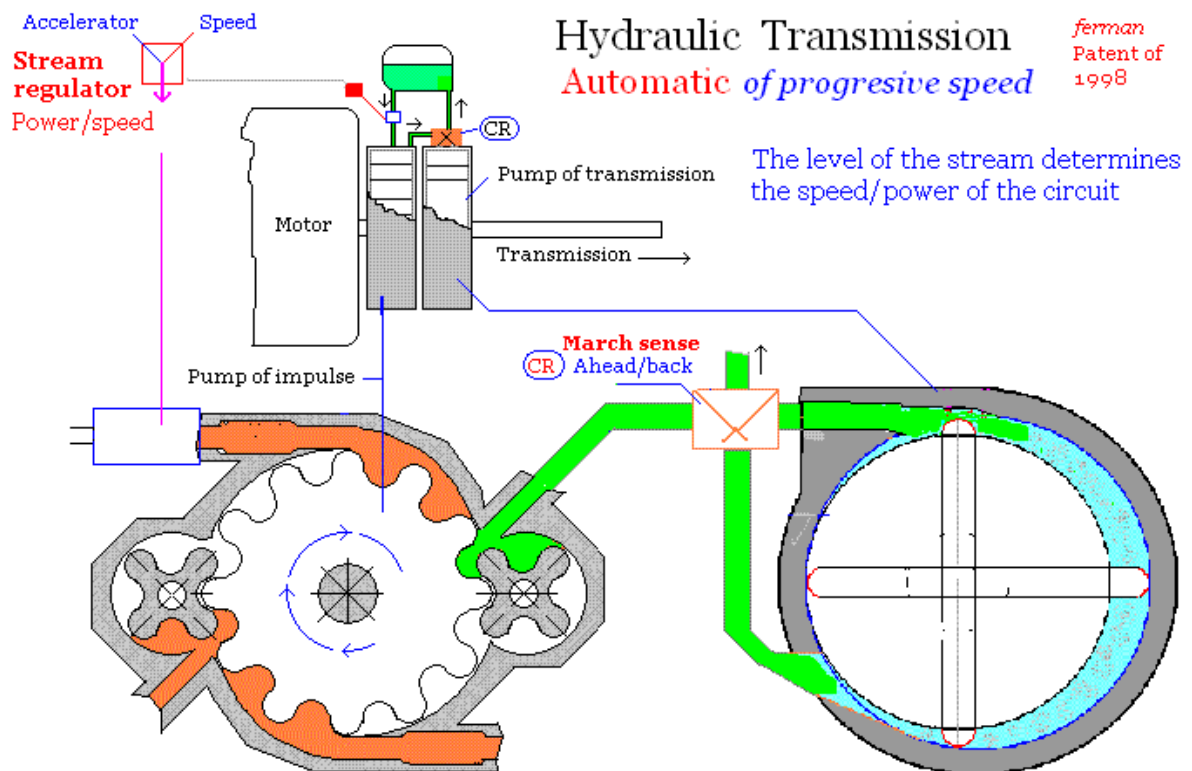


Other device for rotary engine

Rotary engine *Ferman*



As hydraulic transmission

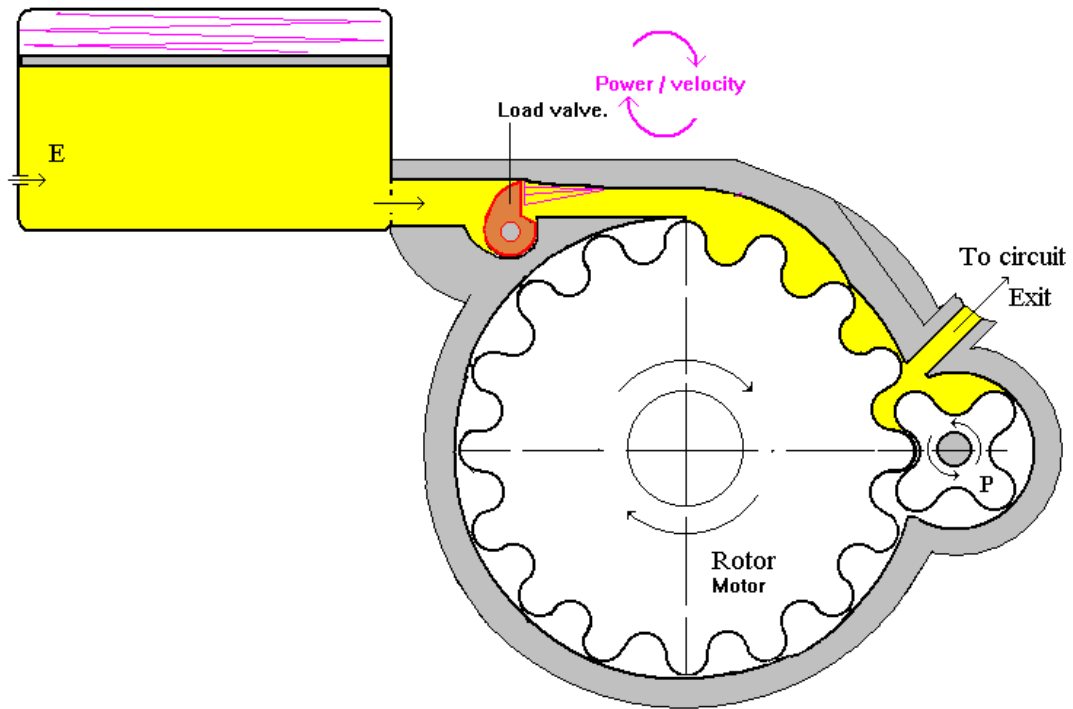


Hydraulic Transmission : Pump of power / speed

Ferman

Invention Patent. P9500229 2-12-98

Drawing 1



Hydraulic Transmission : Wheel Rotors

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Invention Patent. P9500229 2-12-98

Drawing 2

