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Why the Rocket Moves Forward In the Space

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ABSTRACT
The motion of a rocket in the space is just like the motion of a wheel on the road.Rotation is motion and motion is also rotation. If a force is applied on a wheel and the applied force converts to the centripetal force as well as the centrifugal force on the wheel ,thenevery pointon it simultaneously moves in the cycloid path a well as on the straight line path. The centripetal force makes every point of the wheel to rotate in clockwise direction and it is always directed towards the backward direction of the wheel, Simultaneously the centrifugal force drags the wheel to the forward direction.The vertical cycloid path of the point is moved by the centripetal force and simultaneously the horizontal straight line path of the same point is covered by the centrifugal force .Like this principle the wheel moves on the road .

A body is at rest, until the applied force on it ,converts to the centripetal force as well asthe centrifugal force .

A body is at motion, as long as the applied force on it , converts to the centripetal force as well as the centrifugal force .
This fact gives rise to a law ,   **ACTION =REACTION + ABSORPTION**
The rocket moves forward in the space according to this law .When a force is applied to the rocket and the applied force converts to the centripetal force as well as the centrifugal force then simultaneously the centripetal force acts towards the backward of the rocket and the centrifugal force drags the rocket towards the forward direction .So the rocket moves forward in the above principle .
KEY WORDS Absorption, Action, Reaction, Centripetal force , centrifugal force ,Straight line path and cycloid path .


I. INTRODUCTION

Action means the force exerts on the second body by the first body.Reaction means the force exerts on the first body by the second body.Absorption means the force absorbed in the second body .When a force is applied on a body,the body moves some distance by its reaction and absorption .So therelation of action,

absorptionand reaction is obtained from the motion of a wheel. Centripetal force is a force, which is required to move a body uniformly on a circle. This force acts along the radius and towards the centre of the circle. While moving along a circle the body has a constant tendency to regain its natural straight line path .This tendency gives rise to a force, which is called the centrifugal force .It acts along the radius and away from the centre of the circle .Centripetal force is the action force and centrifugal force is the combination of absorption force and reaction force. The centripetal force and the centrifugal force are equal in magnitude and opposite in directions. So where is centripetal force, there is centrifugal force also.

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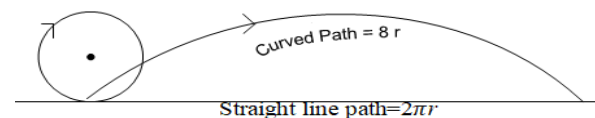
When a force is applied to a wheel, then the wheel rolls on aroad so that every point on it which

touches the road simultaneously moves vertically in a curved path to cover horizontally on a straightline path in its every rotation.The curved path is a cycloid,that is traced out by a point on a circle, which rolls on a straight line .Whose length is calculated by the length formula of calculus as 8r and the length of the horizontal straight line path is 2πr where r is the radius of the circle which generates the cycloid.As every point on the wheel moves on a cycloid path which is the part of a circular path, So the centripetal force acts on the cycloid path

Supposes_1 = length of the cycloid path

and s_2 = length of the straight line path .

v_1= velocity of the cycloid path =$\frac{ds_1}{dt}$

andv_2 =Velocity of the same point on the straight

line path $= \frac{ds_2}{dt}$, As $s_1 > s_2 => \frac{ds_1}{dt} > \frac{ds_2}{dt}$

So $v_1 > v_2$ $=> mv_1 > mv_2 => m\frac{dv_1}{dt} > m\frac{dv_2}{dt}$ So

$ma_1 > ma_2$, where $\frac{dv_1}{dt} = a_1$ and $\frac{dv_2}{dt} = a_2$ Hence

$F_1 > F_2$ where $F_1 = ma_1$ and $F_2 = ma_2$ Here F_1 =**CENTRIPPETAL FORCE** ,

Centripetal force is applied on the point of the wheel, which moves $8r$ length on the cycloid path.

As $F_1 > F_2$ So $F_1 = F_2$ + **SOME ABSORBED FORCE**,

The magnitude of the centripetal force is equal to the magnitude of the centrifugal force and their directions are opposite to each other .

Hence F_2 + **SOME ABSORBED FORCE** =**CENTRIFUGAL FORCE**

Centrifugal force is utilized on that same point, which moves $2\pi r$ length on the Straight line path after absorbing some amount this force .

CENTRIFUGAL FORCE =**REACTION FORCE+ ABSORBED FORCE**

This implies that,

ACTION =REACTION + ABSORPTION

SUBJECT MATTER

Rotation is moton .Every motion is created from rotation .Vehicle moves on the road by the rotation of its wheels .Ship moves in the water by the rotation of its fans .Plane moves in the sky by the rotation of its fans .Man moves on the road by the rotation of its feet .Hence rotation is motion.When a cyclist applies force on the chainwheel of a bicycle then the chainwheel rotates as a resultthe chain is pulled to backward andsimultaneouslythe bicycle is dragged to forward. Sorotation makesa body to move simultaneously on a cycloid path as well as on a straight line path.

If the force is applied on a wheel and the applied force is converted to the centripetal force as well as the centrifugal force on the wheel then every point ofit simultaneously moves on the cycloid path as well as on the straight line path.

The centripetal force makes every point of the wheel to rotate in clockwise direction and it is always directed towards the backward direction of the wheel, Simultaneously the centrifugal force drags the wheel to the forward direction of the wheel on a straight line path .The vertical cycloid path of a point of the wheel is moved by the centripetal force and simultaneously the horizontal straight line path of that same point is covered by the centrifugal force. Like this principle the wheel moves forward on the road by the following law

ACTION =REACTION + ABSORPTION
The rocket moves forward in the space according to the exact principle of the motion of the wheel on the road.

Fuel burns in the Rocketand therebyhot gas is createdfrom the burning of thatfuel. The exhausthot gas works as the applied force. So that applied forcesimultaneously converts to the centripetal force as well as the centrifugal force .The magnitude of the centripetal force is equal to the magnitude of the centrifugal force and their directions are opposite to each other **.**As motion is rotation, Sothe hot gas is pushed towards the backward of the rocket as the centripetal forceandsimultaneously the rocket is draggedtowards the forward directionby centrifugal force.The centrifugal force is the sum of the reaction force as well as the absorption force .

Centrifugal force=
Reaction force + Absorption force

Hencethe rocket moves forward direction in the spaceby the exactprinciple of themotion of the wheel on theroad .This implies thatthe rocket moves to the forwarddirection in the space according to the following law

ACTION =REACTION + ABSORPTION
CONCLUSION

The boat moves on the water exactly according to the principle of the motion of the wheel on the road.

The boatsman applies force from the boat which is on the water. So his applied force simultaneously converts to the centripetal force as well as the centrifugal force .

The centripetal force acts along the hands which are towards the backward direction of the boat and the centrifugal force acts along the legs which are towards the forward direction of the boat .

So his applied force simultaneously converts to the centripetal force as well as the centrifugal force .

Thecentripetal force acts along the hands which are towards the backward directionof the boat and the centrifugal force acts along the legs which are towards the forward direction of the boat.

The centripetal force as well as the centrifugal force are equal in magnitude and opposite in directions. But

Centrifugal force =
Reaction force + Absorption force

So the boat moves to the forward direction due to the centrifugal force .

This implies that the boat moves forward according to the following law

ACTION =REACTION + ABSORPTION

Figure	Caption	Meaning	Value
1	**Cycloid**	Cycloid is a curved path, that is traced out by a point on a circle, Which rolls on a straight line.	**8r = Length of the cycloid**
2	**Straight line**	Length of the circumference of the circle	**2πr**
3	**r**	Radius of the circle	**2πr/2 π**
4	**π**	Circumference of a circle/diameter of the circle	**2πr/2r = π= 22/7 = 3.14159**
5	**Circle**	A circle is a locus of a point whose distance from a fixed point is constant	