

Sung to the tune of "The Yellow Rose of Texas"

Momentum is a concept  
As real as it can be:  
The product of an objects mass  
And its velocity

Its direction and its size are fixed.  
They never change a bit  
Unless a force acts for a time  
(An impulse acts on it).

It takes a mile to stop a train  
That's loaded down with freight.  
Although velocity is slow,  
Its mass is very great.

A bullet from a rifle  
Is rather short on mass.  
But deadly speed it has to spare,  
So dick and let it pass.

To set a thing in motion,  
To get in off the dime,  
We must apply an impulse;  
We push it for a time.

It's just as hard to stop it.  
Here, too, impulse we need.  
Both time and force will slow it  
And make it give up speed.

Momentum is a vector,  
So objects will not swerve,  
Unless some sideways impulse  
Is used to make them curve.

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As real as it can be;  
The product of an object's mass  
And its velocity.