Sung to the tune of “The Yellow Rose of Texas”

Momentum is a concept
As real as it can be:
The product of an object’s 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 it 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.

Momentum is a concept
As real as it can be;
The product of an object’s mass
And its velocity.