Iron Dome Game

We would like to create a console application to simulate a cannon firing projectiles to hit airborne targets.
The code should be submitted in **C++, ready to compile and run**.

Included is an initial project that compiles and runs under Linux, showing a two-dimensional environment with a "pitcher" on the edge of the screen, throwing "plate" targets every few seconds, at random speeds.

Output:
The application should display a two-dimensional environment (X axis represents horizontal distance, Y axis represents vertical distance).
A "plate" is launched to the air with initial speed, then falls to the ground under the affect of gravity.
A "cannon" should be visible, and under the control of the user – pressing "Enter" key to fire.
The "cannon" should release a "rocket" projectile flying in a relative straight line, under the affect of gravity.
On hit, the "rocket" and the "plate" should be destroyed.

Input:
User presses "Enter" key to fire a "rocket" from the "cannon".

Implement:
- Grid::intersects(..) function, used to determine if two entities intersect.
- Cannon.
- Rocket.

Notice:
The initial project code is included to get you started – please analyze and improve as you see fit...

We focus on checking the quality of the code and adhering to the principles of object-oriented programming.
Therefore, the movement logic and the output representation can be simplified, including a simple fixed firing cannon.
The use of outside libraries is allowed, although not neccesary.
Please submit your implementation to compile in a Linux environment.