CLAIMS

1. A rocket-based armament launchable from a tubular launcher that comprises -

an effective payload; and

a rocket motor that is structurally connected to the effective payload and is adapted from the time of ~~its~~ ignition of the rocket motor to propel the effective payload; and

a pyrotechnic assembly that has been adapted, once actuated, to eject the rocket motor and said effective payload from said tubular launcher and to ignite said rocket motor; and

wherein said rocket armament is characterized in that -

said armament also comprises -

a. a gas dispersion assembly, which when said rocket armament is not encased in the tubular launcher, prevents the ignition of said rocket motor even if said pyrotechnic assembly is actuated; and

b. a cutting and separation assembly that is actuated by the pressure of said rocket motor gases for mechanically cutting the structural connection between the rocket motor and the effective payload and separate the rocket motor and the effective payload ~~them~~ during ~~their~~ flight of the armament.

2. A rocket armament of claim 1, wherein said gas dispersion assembly comprises -

a dispersing openings array that is connected to ~~the~~ flow of gas mass produced by the actuation of said pyrotechnic assembly, and is encaseable by ~~the~~ an interior surface of said tubular launcher in a manner that prevents ~~the~~ dispersion of gas through ~~it~~the dispersing openings array; and

a bushing member that is formed as a sort of piston, one end of which is located inside ~~the~~ an ejection nozzle of said rocket motor, in a manner that prevents the ignition of the rocket motor by the force of the gas mass produced by the actuation of said pyrotechnic assembly, if said dispersing openings array is not encased in the tubular launcher ~~as said~~, and therefore enables the dispersion of gases through ~~it~~the dispersing openings array.

3. A rocket armament of claim 1, wherein said cutting and separation assembly comprises-

a cutting piston located at ~~the~~ an end of said rocket motor and is stressed on ~~the one~~ a side of the cutting piston by the force of the gas pressure that is formed by the ignition ~~action~~ of said rocket motor, in a linear motion towards said structural connection between the rocket motor and the effective payload, and to mechanically cut the structural connection; and

a springy means that rests on said structural connection and stresses said cutting piston on ~~its~~ another other side of the cutting piston against ~~its~~ linear motion of the cutting piston, and once ~~the~~ mechanical cutting is completed, ~~it~~ the springy means helps to thrust said rocket motor and separate ~~it~~ the rocket motor from the effective payload.

4. A rocket armament of claim 1, wherein said armament is a 40mm armament that is launchable from said tubular launcher, ~~which~~ the tubular launcher being~~is~~ a grenade launcher or a single-use disposable canister.

5. A gas dispersion assembly of a pyrotechnic assembly that can be fitted in a rocket-based armament that is launchable from a tubular launcher, from ~~the~~ time of actuation of the pyrotechnic assembly, in order to prevent ~~the~~ ignition of ~~the~~ rocket motor of said armament when it is not encased in a tube and notwithstanding ~~the~~ actuation of said pyrotechnic assembly, wherein said gas dispersion assembly comprises -

a dispersing openings array that is connected to ~~the~~ flow of gas mass produced by the actuation of said pyrotechnic assembly, and is encaseable by ~~the~~ an interior surface of said tubular launcher in a manner that prevents ~~the~~ dispersion of gas through ~~it~~the dispersing openings array; and

a bushing member that is formed as a sort of piston, one end of which is located inside the ejection nozzle of said rocket motor, in a manner that prevents the ignition of the rocket motor by the force of the gas mass produced by the actuation of said pyrotechnic assembly, if said dispersing openings array is not encased in the tubular launcher~~as stated~~, and therefore enables the dispersion of gases through said array.

6. A cutting and separation assembly, which is actuated by gas pressure of armament's rocket motor in order to mechanically cut ~~the~~ a structural connection between the armament's rocket motor and the armament's effective payload and ~~their~~ separation of the rocket motor and the effective payload during ~~the~~ flight of the armament, wherein said cutting and separation assembly comprises -

a cutting piston located at ~~the~~ an end of said rocket motor and is stressed on ~~the~~ one side of the cutting piston from the force of the gas pressure that forms from the ignition ~~action~~ of said rocket motor, to a linear motion towards said structural connection between the rocket motor and the effective payload, and to mechanically cut the structural connection; and

a springy means that rests on said structural connection and stresses said cutting piston on ~~its~~ another ~~other~~ side of the cutting piston against said linear motion, and once ~~the~~ mechanical cutting is completed, ~~it~~ the springy means helps to thrust said rocket motor and separate the rocket motor ~~it~~ from the effective payload.

7. A method to prevent ~~the~~ ignition of a rocket armament launchable from a tubular launcher, even in the event of actuation of ~~the~~ a pyrotechnic assembly, which normally serves to eject the armament from the tubular launcher and to ignite ~~the~~ a rocket motor, wherein the method comprises the stages of:

providing and locating a dispersing openings array that is connected to ~~the~~ flow of gases produced by the actuation of the pyrotechnic assembly, while diverting the flow of gases from the rocket motor and preventing ~~its~~ resulting ignition of the rocket motor; and

encasement of said dispersing openings array by an encasement member, in a manner that routes the gases formed from the actuation of the pyrotechnic assembly to the rocket motor, as required for ~~its~~ ignition of the rocket motor.

8. A method applicable in a rocket-based armament for mechanically cutting ~~the~~ a structural connection between ~~the~~ a rocket motor and ~~the~~ an effective payload of the rocket-based armament, and separating ~~them~~ the rocket motor and the effective payload from each other, wherein the method comprises the stages of:

setting a cutting piston into linear motion by the pressure of ~~the~~ gases produced from ~~the~~ combustion of the rocket motor's propellant towards the structural connection between the rocket motor and the effective payload; and

exertion of shearing force by means of said cutting piston on the structural connection ~~and separating it by cutting it~~; and

separation of the rocket motor from the effective payload once the cutting is completed.