C L A I M S

What is claimed is:

1. A training projectile comprising a cartridge shell having a propulsion chamber with a propellant charge and a hollow projectile body inserted in the cartridge shell, the projectile body having a central axis of rotation and comprising:

(a) a projectile head designed to withstand the forces applied when the projectile is fired from a weapon and having a frangible ogive designed to burst when the projectile strikes a target;

(b) a plurality of first, frangible, compartments made of foil and disposed in said head substantially symmetrically about the central axis of rotation, said first compartments being designed to be broken by the centrifugal forces on the projectile when the projectile is fired from a weapon;

(c) at least one marking agent disposed in the head for marking the position of the target upon its release when the ogive has burst, said marking agent comprising a plurality of first chemical components each disposed in a separate one of said first compartments in the head, said first components being mixed and reacting chemically with each other when the first compartments are broken, causing the mixed components to substantially react by the time the projectile strikes the target; and

(d) a plurality of masses, each disposed in a separate one of said first compartments together with a respective one of said first components, each mass being denser than said respective first component in said first compartment and serving to break the first compartment within which it resides due to the centrifugal forces on the projectile when the projectile is fired from a weapon.

2. The training projectile defined in claim 1, wherein the first chemical components are a liquid.

3. The training projectile defined in claim 1, wherein each said mass is pellet-shaped.

4. The training projectile defined in claim 3, wherein each said mass is a metal pellet.

5. The training projectile defined in claim 1, further comprising a carrier surrounding the first compartments for receiving the mixed first chemical components when the first compartments are broken.

6. The training projectile defined in claim 5, wherein the carrier comprises a dry powder.

7. The training projectile defined in claim 1, further comprising a second marking agent comprising a low density, fine, dry powder material disposed in a separate compartment in the head and designed to create a plume for marking the target when the projectile strikes the target and the ogive bursts.

8. The training projectile defined in claim 1, further comprising a third marking agent comprising a plurality of second chemical components each received in a separate compartment in the head, said second components being mixed and reacting chemically with each other, due to at least one of the initial acceleration and the centrifugal forces on the projectile, when the projectile is fired from a weapon, causing the mixed second components to substantially react by the time the projectile strikes the target.

9. The training projectile defined in claim 2, wherein the first chemical components react chemi-luminescently, thereby to mark the target with light upon impact.

10. The training projectile defined in claim 2, wherein the first chemical components react exothermically, thereby to thermally mark the target upon impact.

CLAIMS

What is claimed is:

1. A training projectile comprising a cartridge shell having a propulsion chamber with a propellant charge and a hollow projectile body inserted in the cartridge shell, the projectile body having a central axis of rotation and comprising:

(a) a projectile head designed to withstand the forces applied when the projectile is fired from a weapon and having a frangible ogive designed to burst when the projectile strikes a target, said ogive having a tubular portion and a head portion at an end of the tubular portion farthest from the cartridge shell;

(b) a plurality of first, frangible, compartments disposed in said tubular portion substantially symmetrically about the central axis of rotation of the projectile, and a cylindrical second compartment in said tubular portion surrounding said first compartments;

(c) a first marking agent for marking the position of the projectile impact with a target upon its release when the ogive has burst, said first marking agent comprising a plurality of first chemical components each disposed in a separate one of said first compartments, said first components being mixed and reacting chemically with each other when the first compartments are broken, causing the mixed components to react; and

(d) a plurality of pellet masses, each disposed in a separate one of said first compartments together with a respective one of said first components, each mass being denser than said respective first component in said first compartment and serving to break the first compartment within which it resides due to the centrifugal forces on the projectile when the projectile is fired from a weapon.

2. The training projectile defined in claim 1, wherein the first chemical components are a liquid.

3. The training projectile defined in claim 1, wherein each said mass is pellet-shaped.

4. The training projectile defined in claim 3, wherein each said mass is a metal pellet.

5. The training projectile defined in claim 1, further comprising a carrier disposed in said second compartment surrounding the first compartments for receiving the mixed first chemical components when the first compartments are broken.

6. The training projectile defined in claim 5, wherein said first chemical components are a liquid are wherein the carrier comprises a dry powder.

7. The training projectile defined in claim 1, further comprising a second marking agent disposed in the ogive for making the position of the projectile impact upon its release when the projectile strikes the target and the ogive bursts.

8. The training projectile defined in claim 1, further comprising a third marking agent disposed in the ogive for marking the position of the projectile impact with a target upon its release when the projectile strikes the target and the ogive bursts, said third marking agent comprising a plurality of second chemical components each received in a separate compartment in the head, said second components being mixed and reacting chemically with each other, due to at least one of the initial acceleration and the centrifugal forces on the projectile, when the projectile is fired from a weapon, causing the mixed second components to substantially react by the time the projectile strikes the target.

9. The training projectile defined in claim 2, wherein the first chemical components react chemi-luminescently, thereby to mark the projectile position with light upon impact with a target.

10. The training projectile defined in claim 2, wherein the first chemical components react exothermically, thereby to thermally mark the projectile position upon impact with a target.

11. The training projectile defined in claim 7, wherein said second marking agent comprises a low density, fine, dry powder material disposed in a separate compartment in the ogive and designed to create a plume for marking the projectile position upon impact with a target when the ogive bursts.

12. The training projectile defined in claim 7, wherein said second marking agent is disposed in said head portion of said ogive.