

WHAT IS CLAIMED IS:

1. A toy projectile launcher, comprising:
 - a launch barrel;
 - a handle comprising an internal projectile storage area;
 - at least one pair of resilient flaps, the at least one pair of resilient flaps being inwardly biased and disposed on respective first and second sides at a top opening of the internal projectile storage area;
 - an air piston assembly that comprises a barrel and a plunger element;
 - a sliding handle coupled to the barrel, the sliding handle being movable between a forward position and a backward position, thereby moving the barrel between corresponding forward and backward positions;
 - a spring that biases the plunger element towards a front portion of the toy projectile launcher;
 - and
 - a latching assembly that couples the plunger element to a trigger assembly when the sliding handle is moved to the backward position and the barrel is moved to the corresponding backward position, wherein
 - the barrel covers at least a portion of the top opening when in the corresponding forward position forming an airtight seal between the launch barrel and the barrel and the one or more pairs of resilient flaps contact the respective first and second sides of the barrel, and
 - the trigger assembly, upon toggling, releases the coupling of the latching assembly between the plunger element and the trigger assembly.
2. The toy projectile launcher of claim 1, wherein the plunger element extends the extension spring away from the front portion when the sliding handle is moved to the backward position.
3. The toy projectile launcher of claim 1, wherein a projectile from the internal projectile storage area is held between the at least one pair of resilient flaps when the barrel is moved to the corresponding backward position.

4. The toy projectile launcher of claim 1, wherein the sliding handle, when moved to the backward position, creates an opening in the toy projectile launcher for loading projectiles into the internal projectile storage area.

5. The toy projectile launcher of claim 1, wherein, when the sliding handle is moved from the backward position to the forward position with the latching assembly coupling the plunger element to the trigger assembly, the barrel is moved to the corresponding forward position and forms an internal air chamber with the plunger element, the internal air chamber being filled with air drawn in from a front nozzle of the barrel.

6. The toy projectile launcher of claim 5, wherein the plunger element is pulled forward by the extension spring to expel the air from the internal air chamber through the front nozzle of the barrel when the coupling of the latching assembly between the plunger element and the trigger assembly is released.

7. The toy projectile launcher of claim 5, further comprising a projectile in the internal air chamber immediately adjacent the front nozzle of the barrel.

8. The toy projectile launcher of claim 1, wherein the barrel has an oval cross-section.

9. The toy projectile launcher of claim 8, wherein the oval shape of the barrel incorporates a 7:5 height-to-width ratio.

10. A toy projectile launcher, comprising:
a launch barrel;
a projectile storage area;
a pair of inwardly-biased resilient flaps disposed on respective first and second sides at a top opening of the projectile storage area;
an oval-shaped air piston assembly that comprises a barrel and a plunger element;

a sliding handle coupled to the barrel, the sliding handle being movable between a forward position and a backward position, thereby moving the barrel between corresponding forward and backward positions;

a spring that biases the plunger element towards a front portion of the toy projectile launcher; and

a latching assembly that couples the plunger element to a trigger assembly when the sliding handle is moved to the backward position and the barrel is moved to the corresponding backward position, wherein

the barrel covers the top opening when in the corresponding forward position forming an air-tight seal between the launch barrel and the barrel and the pair of inwardly-biased resilient flaps contact the respective first and second sides of the barrel, and

the trigger assembly, upon toggling, releases the coupling of the latching assembly between the plunger element and the trigger assembly.

11. A toy projectile launcher, comprising:

a launch barrel;

a handle comprising an internal projectile storage area;

at least one pair of resilient flaps, the at least one pair of resilient flaps being inwardly biased and disposed on respective first and second sides at a top opening of the internal projectile storage area;

an air piston assembly that comprises a barrel and a plunger element;

a sliding handle coupled to the barrel, the sliding handle being movable between a forward position and a backward position, thereby moving the barrel between corresponding forward and backward positions;

a compression spring that biases the plunger element away from a rear wall in the toy projectile launcher; and

a latching assembly that couples the plunger element to a trigger assembly when the sliding handle is moved to the backward position and the barrel is moved to the corresponding backward position, wherein

the barrel covers at least a portion of the top opening when in the corresponding forward position forming an airtight seal between the launch barrel and the barrel and the one or more pairs of resilient flaps contact the respective first and second sides of the barrel, and

the trigger assembly, upon toggling, releases the coupling of the latching assembly between the plunger element and the trigger assembly.

12. The toy projectile launcher of claim 11, wherein the plunger element compresses the compression spring against the rear wall when the sliding handle is moved to the backward position.

13. The toy projectile launcher of claim 11, wherein a projectile from the internal projectile storage area is held between the at least one pair of resilient flaps when the barrel is moved to the corresponding backward position.

14. The toy projectile launcher of claim 11, wherein the sliding handle, when moved to the backward position, creates an opening in the toy projectile launcher for loading projectiles into the internal projectile storage area.

15. The toy projectile launcher of claim 11, wherein, when the sliding handle is moved from the backward position to the forward position with the latching assembly coupling the plunger element to the trigger assembly, the barrel is moved to the corresponding forward position and forms an internal air chamber with the plunger element, the internal air chamber being filled with air drawn in from a front nozzle of the barrel.

16. The toy projectile launcher of claim 15, wherein the plunger element is pushed forward by the compression spring to expel the air from the internal air chamber through the front nozzle of the barrel when the coupling of the latching assembly between the plunger element and the trigger assembly is released.

17. The toy projectile launcher of claim 15, further comprising a projectile in the internal air chamber immediately adjacent the front nozzle of the barrel.

18. The toy projectile launcher of claim 11, wherein the at least one pair of resilient flaps comprises a front pair of resilient flaps and a back pair of resilient flaps disposed at respective front and back portions of the top opening of the internal projectile storage area.

19. The toy projectile launcher of claim 18, wherein the barrel has an oval cross-section.

20. The toy projectile launcher of claim 19, wherein the oval shape of the barrel incorporates a 7:5 height-to-width ratio.

21. A toy projectile launcher, comprising:
a projectile storage area;
a front pair of inwardly-biased resilient flaps disposed on respective first and second sides at a front portion of a top opening of the projectile storage area;
a rear pair of inwardly-biased resilient flaps disposed on the respective first and second sides at a rear portion of the top opening of the projectile storage area;
an oval-shaped air piston assembly that comprises a barrel and a plunger element;
a sliding handle coupled to the barrel, the sliding handle being movable between a forward position and a backward position, thereby moving the barrel between corresponding forward and backward positions;
a compression spring that biases the plunger element away from a rear wall in the toy projectile launcher; and
a latching assembly that couples the plunger element to a trigger assembly when the sliding handle is moved to the backward position and the barrel is moved to the corresponding backward position, wherein
the barrel covers the top opening when in the corresponding forward position and the front and rear pairs of the inwardly-biased resilient flaps contact the respective first and second sides of the barrel, and
the trigger assembly, upon toggling, releases the coupling of the latching assembly between the plunger element and the trigger assembly.

22. A toy projectile launcher, comprising:

a launch barrel;
a body and a handle;
a projectile storage area in the handle in communication with the body; and
an air piston assembly in the body, the air piston assembly comprising a barrel, a plunger element and a nozzle,

the barrel moveable relative to the plunger from an uncocked position to a cocked position wherein the nozzle is immediately adjacent the projectile storage area adjacent the body in the cocked position forming an airtight seal between the barrel and the launch barrel.

23. The toy projectile launcher of claim 22, wherein the air piston assembly has an oval shaped cross-section with a narrower side extending across a width of the body of the launcher.