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## (54) Title of the invention : PROJECTILE PROPULSION MECHANISM FOR A FIREARM

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## (57) Abstract :

A firearm 100 comprises a combustion chamber 102, a bolt carrier mechanism 108, a trigger mechanism 112, and a cylinder. The combustion chamber 102 is adapted to receive a projectile 104 to be fired from firearm 100 and configured to receive a portion of the propellant from cylinder 110. The bolt carrier mechanism 108 is configured to load projectile 104 into the combustion chamber 102, and secure projectile 104 within the combustion chamber 102. The cylinder 110 detachably coupled to the firearm 100 and fluidically coupled to the combustion chamber 102. Additionally, the trigger mechanism 112 is configured to provide ignition to any propellant within the combustion chamber 102, and responsive to actuation the trigger mechanism 112 ignites the propellant in the combustion chamber 102 and causes resulting expanding gases of combustion to propel the projectile 104 out of the firearm 100.

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