

## PART XI

# SCHEMATIC ILLUSTRATIONS OF REPRESENTATIVE MECHANISMS

## Chapter 5

# FEED SYSTEMS

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A. Lever Type

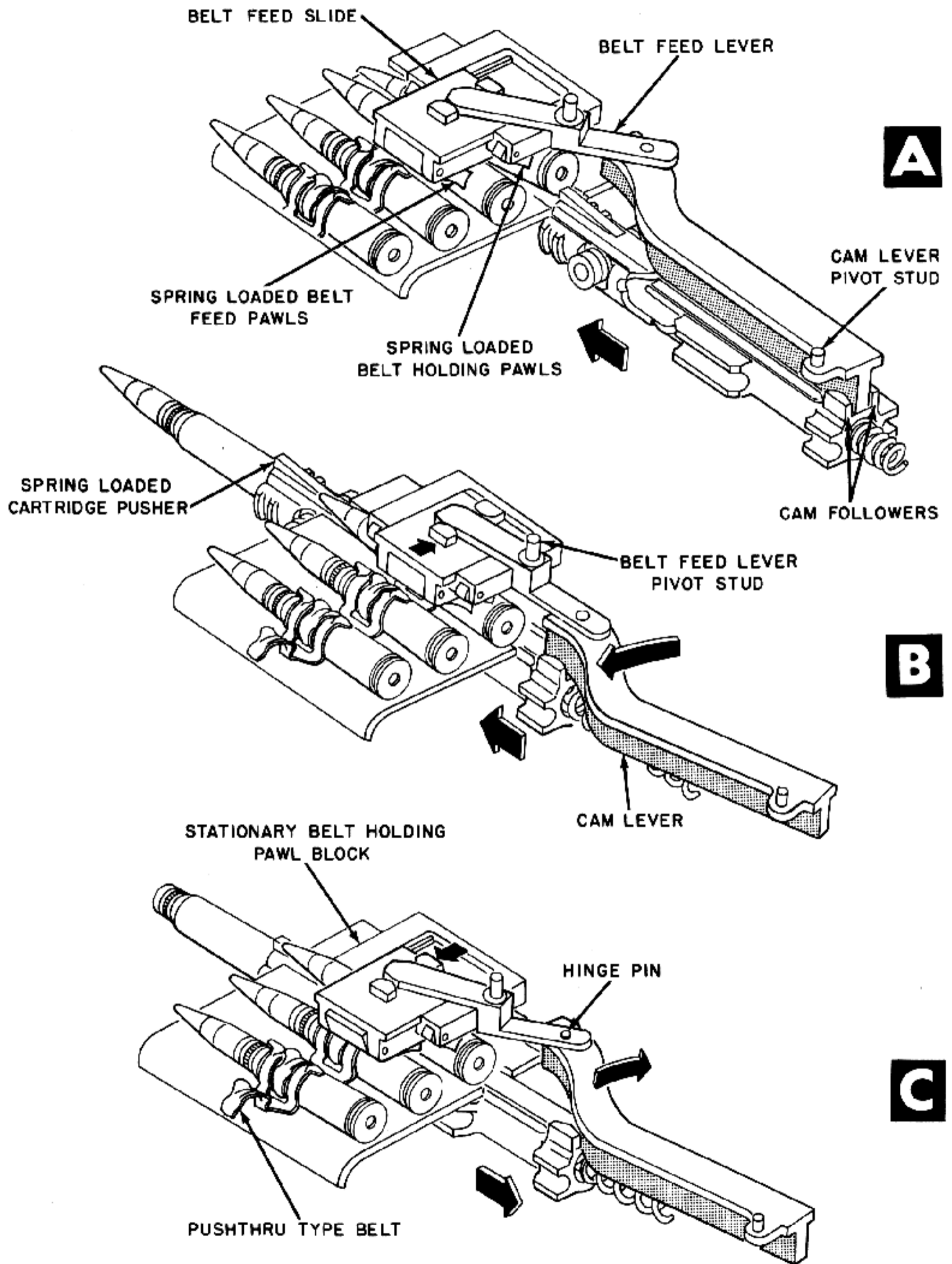
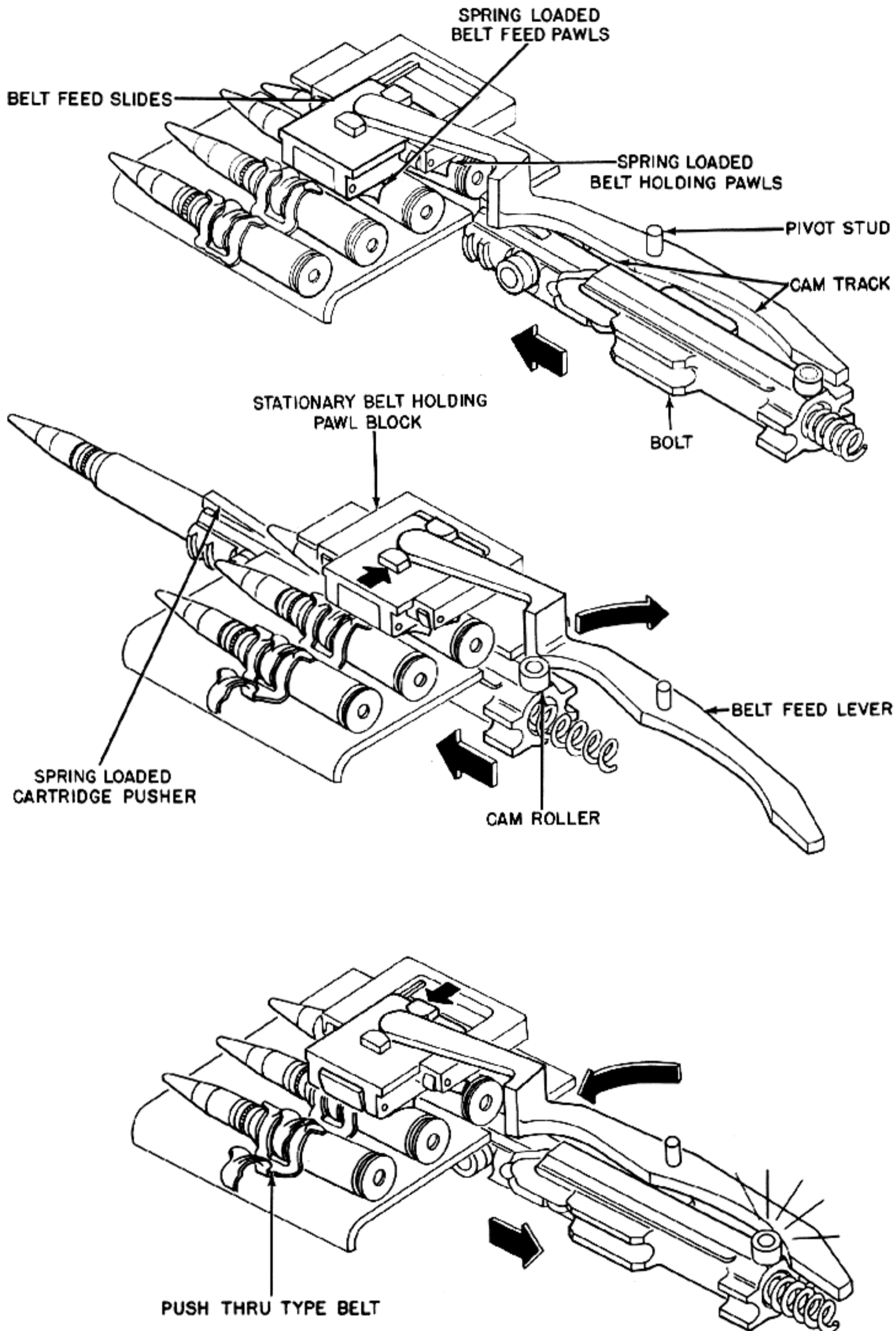


Figure 5-1. Cam Followers on Bolt Actuate Belt Feed Lever.



**A**

**B**

**C**

Figure 5-2. Roller on Bolt Actuates Feed Lever.



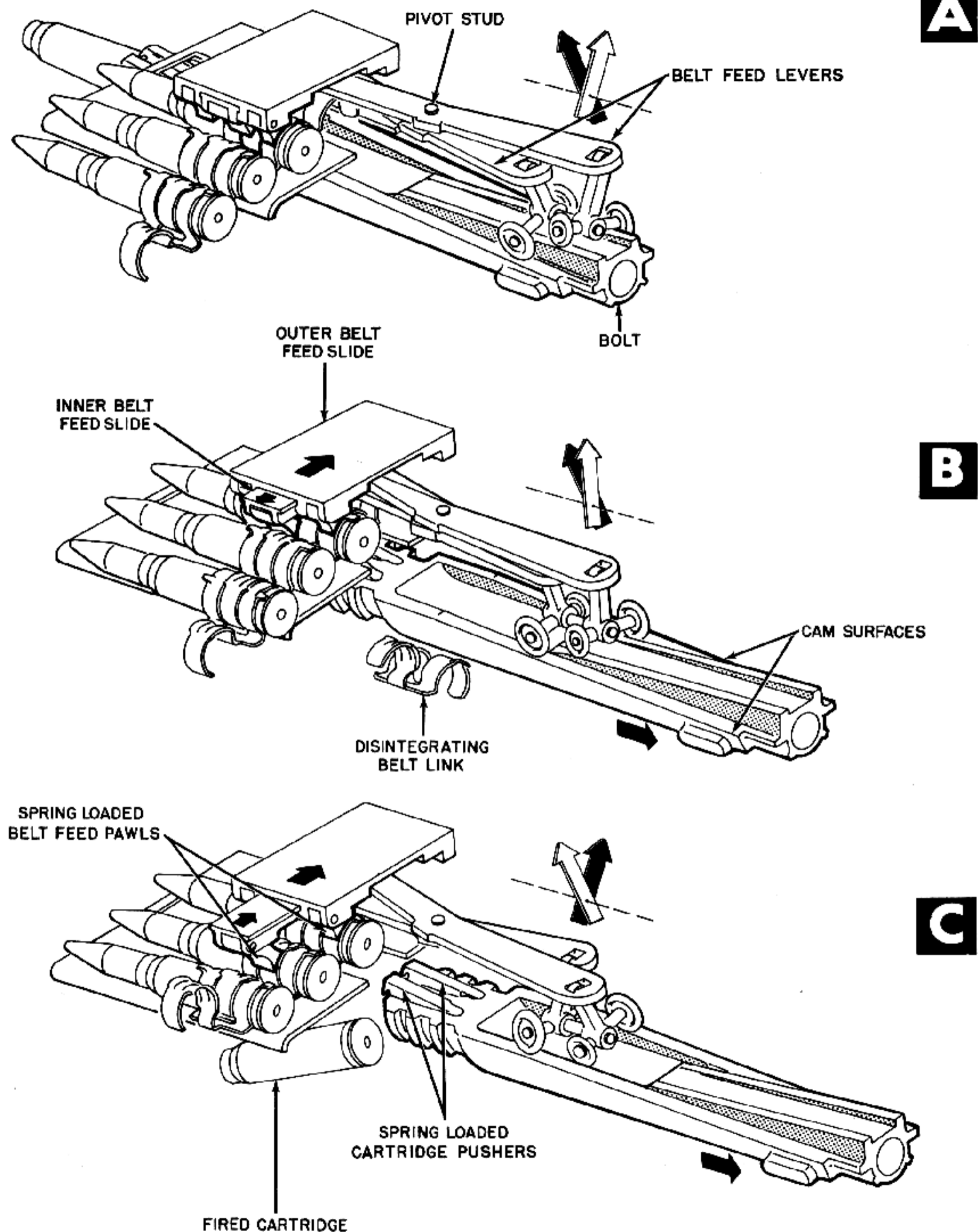


Figure 5-3. Cam Surfaces on Bolt Actuate Belt Feed Lever.

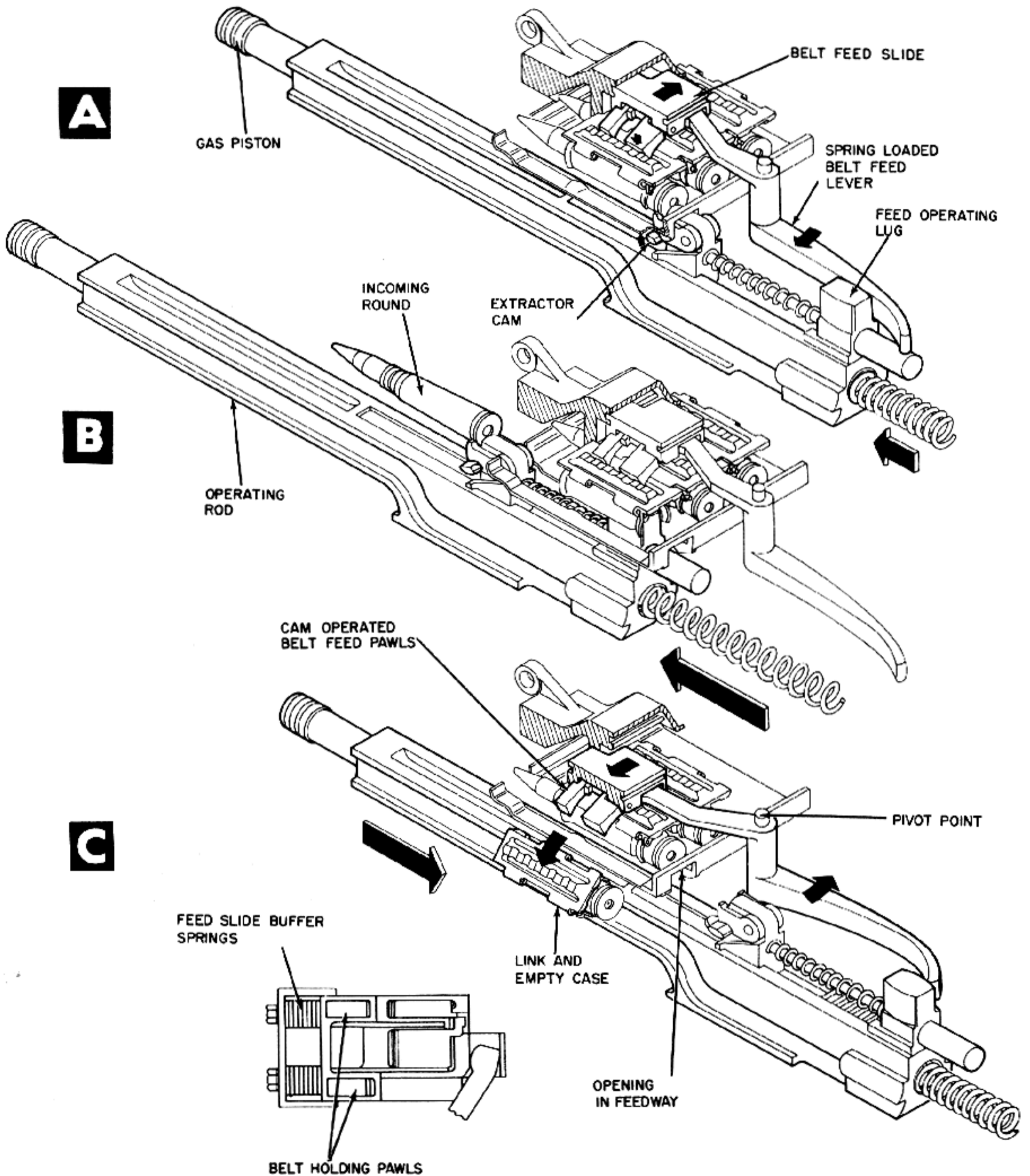
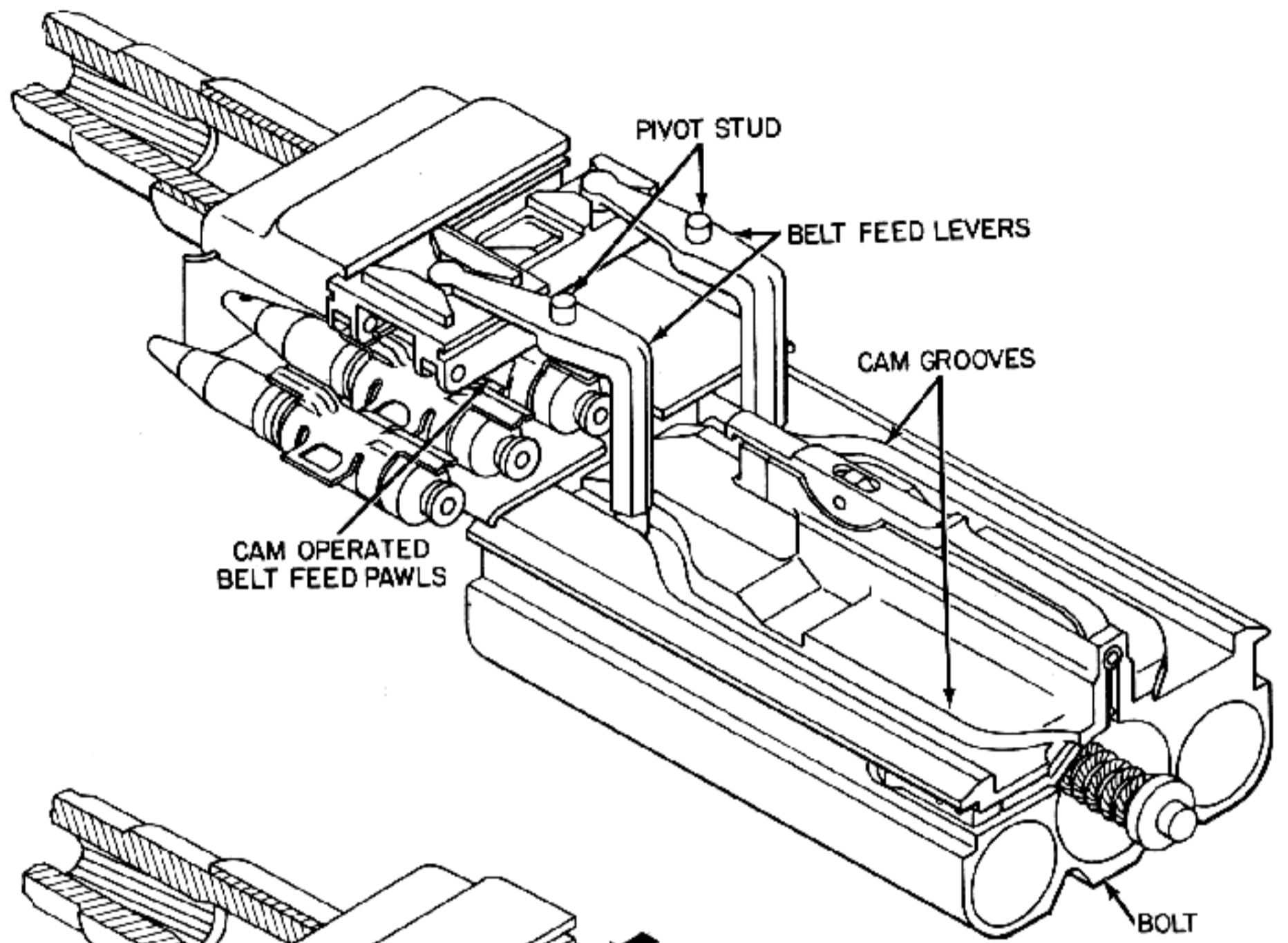
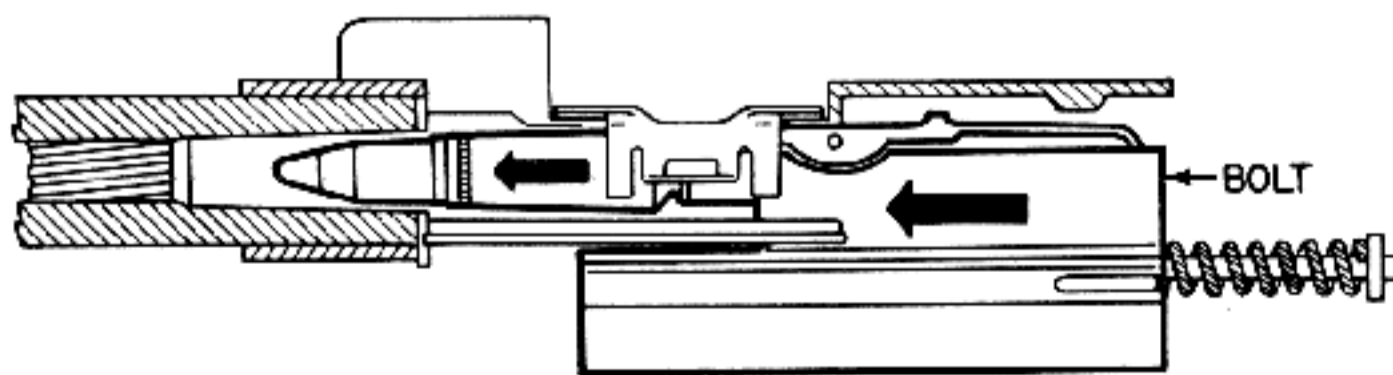
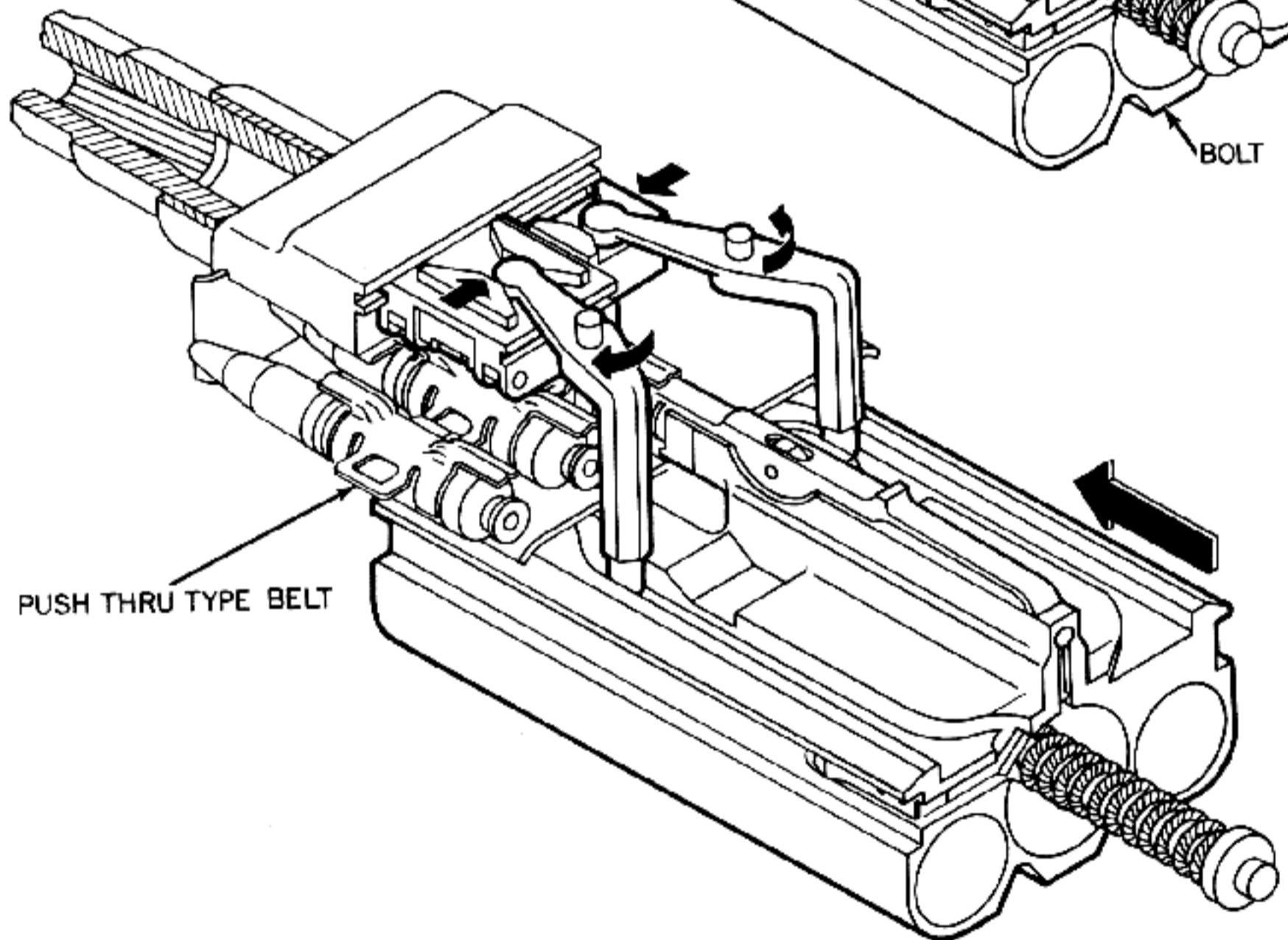


Figure 5-4. Lug on Operating Rod Actuates Belt Feed Lever.

**A**



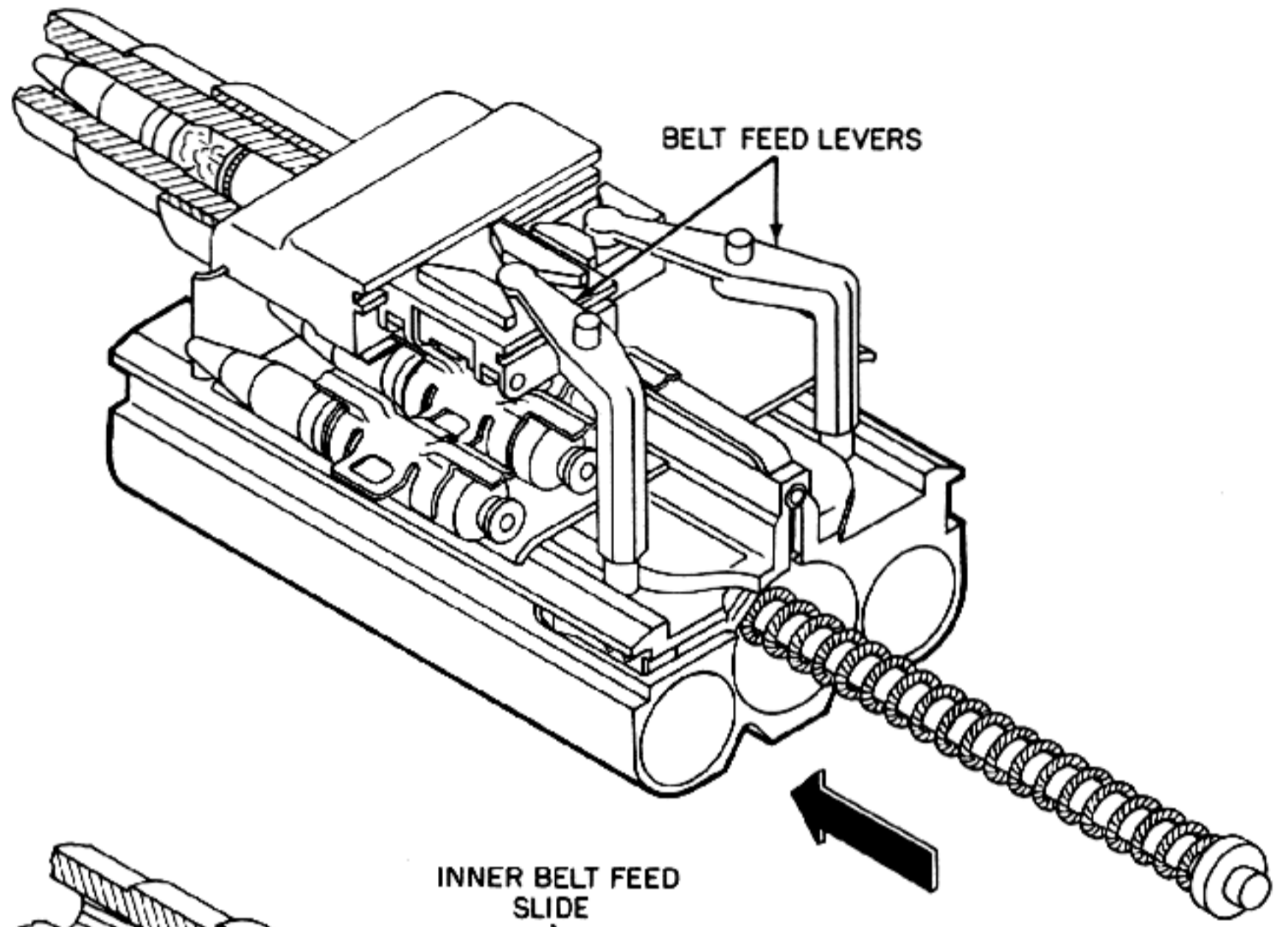
**B**



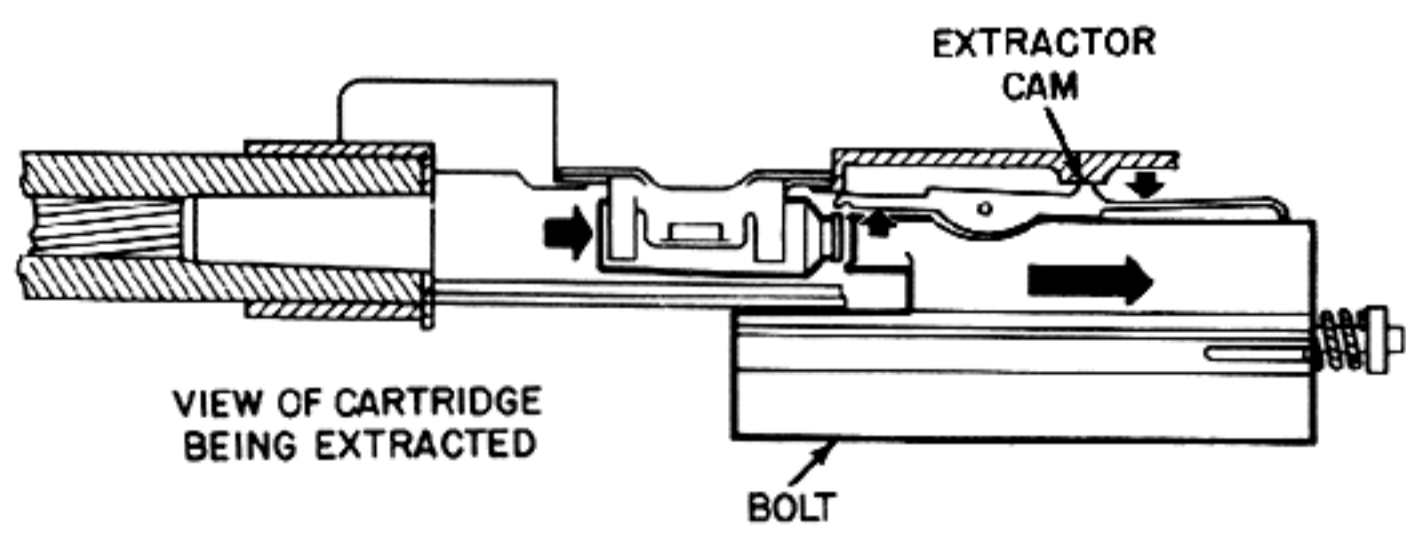
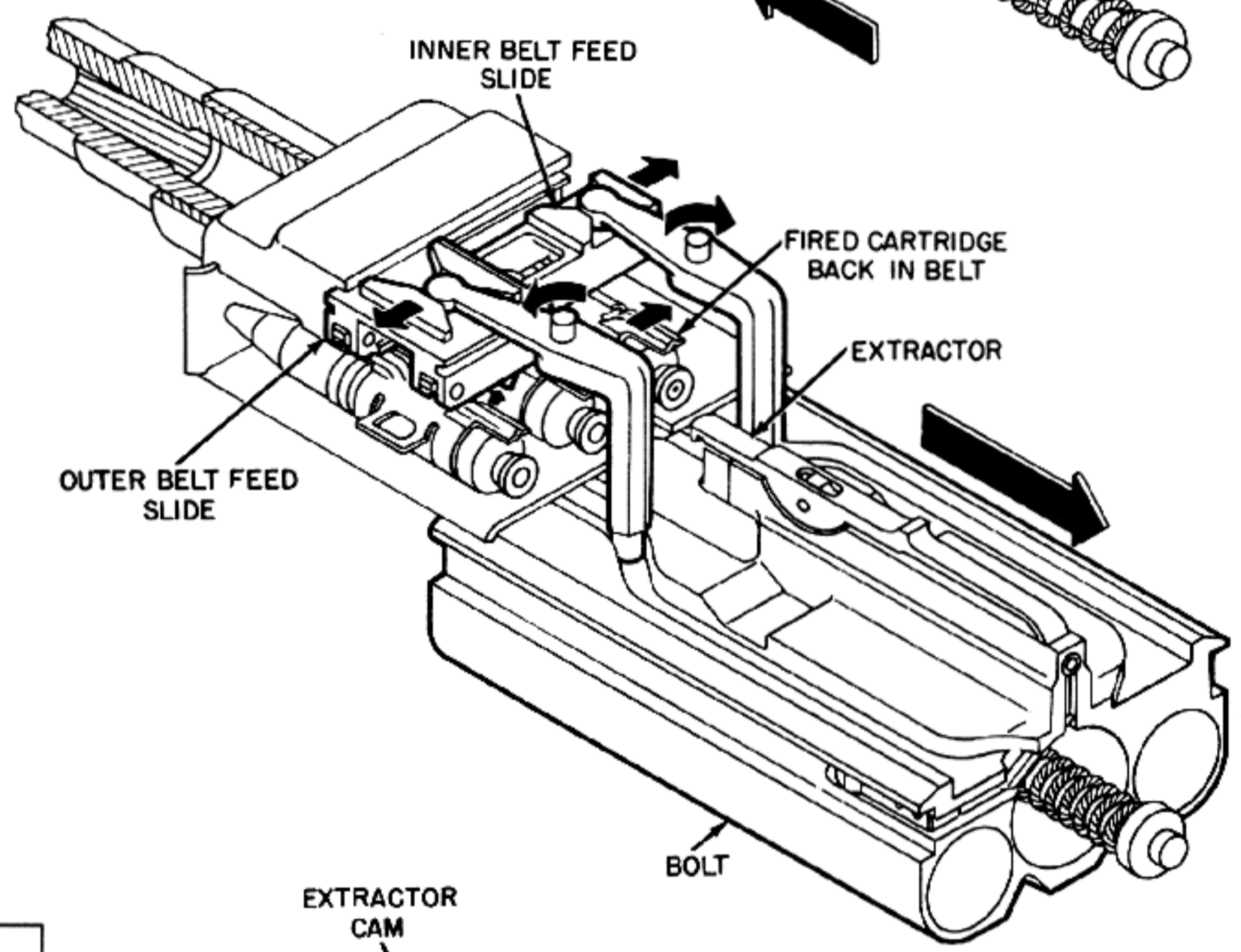
VIEW OF CARTRIDGE BEING CHAMBERED

Figure 5-5. Cam Grooves in Bolt

**C**



**D**



Actuate Belt Feed Lever.



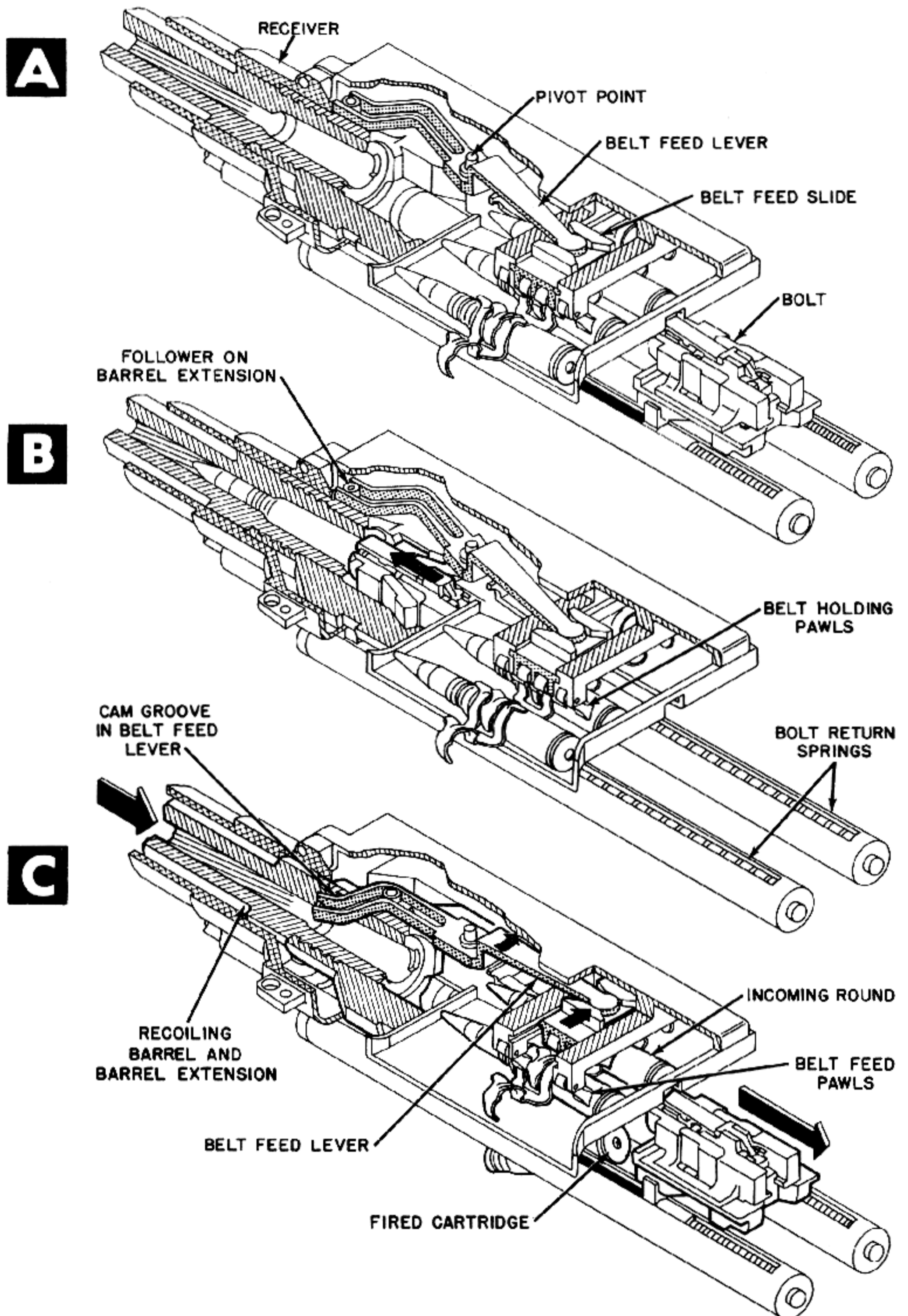


Figure 5-6. Follower on Barrel Extension Actuates Belt Feed Lever.

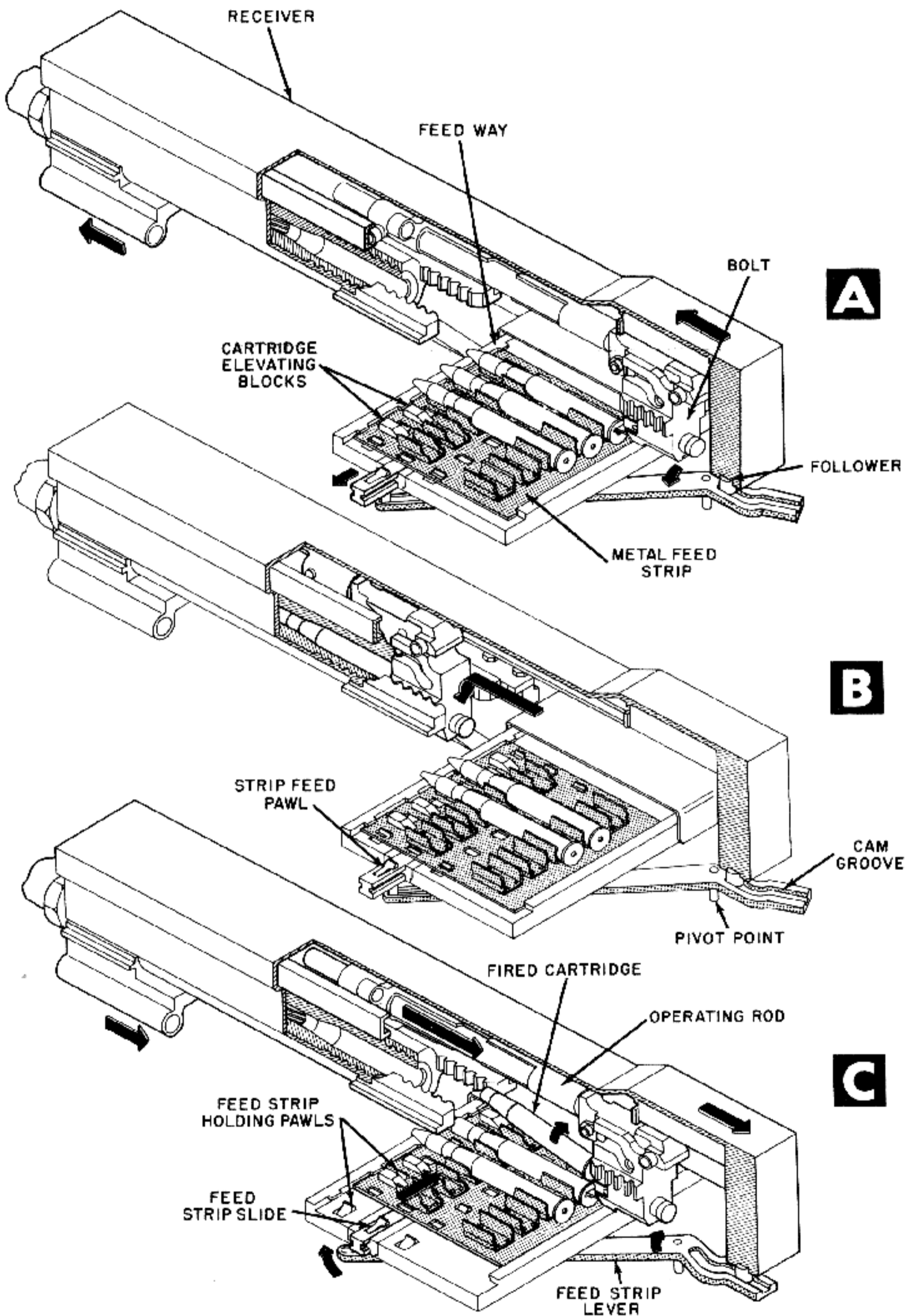


Figure 5-7. Follower on Receiver Actuates Strip Feed Lever.

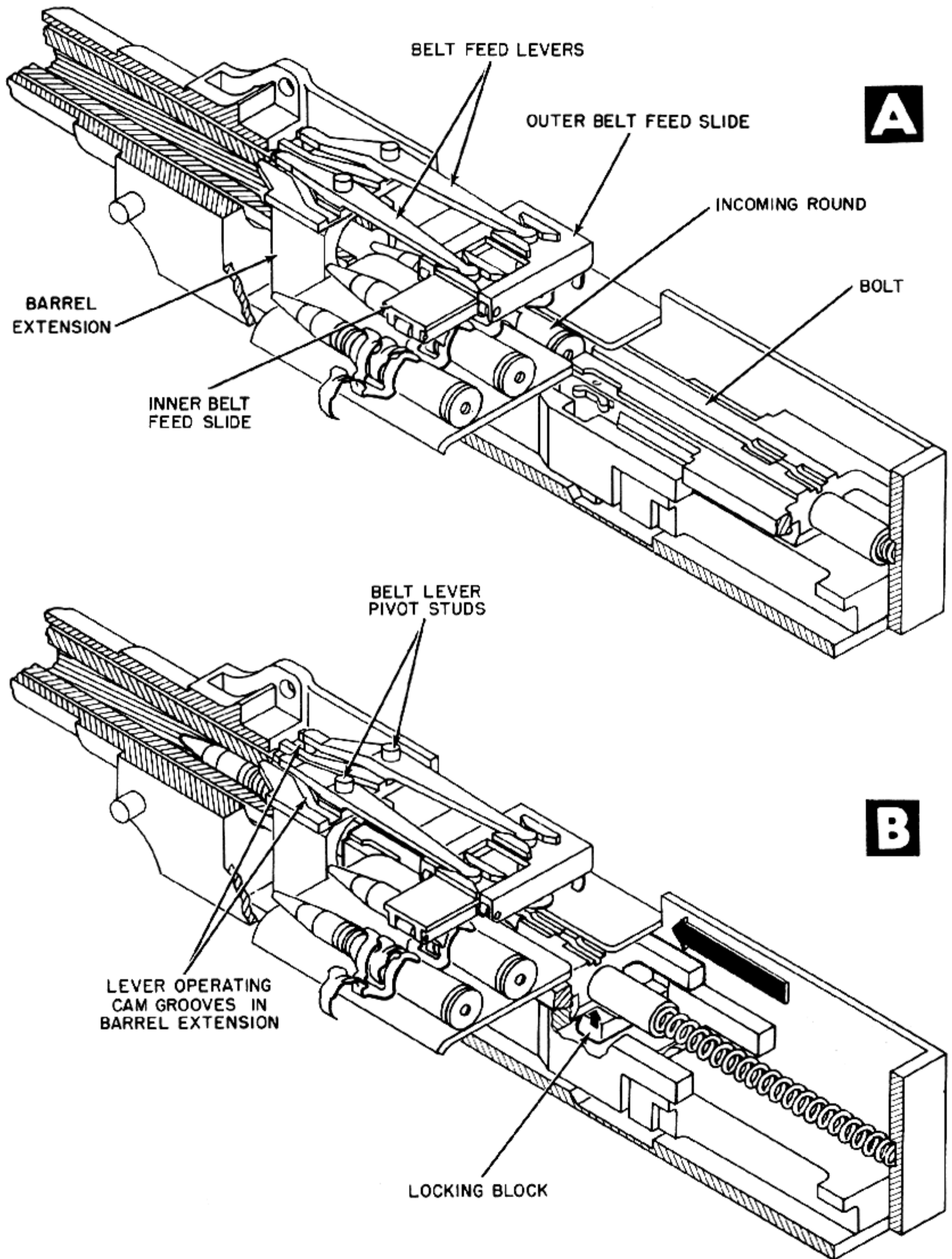
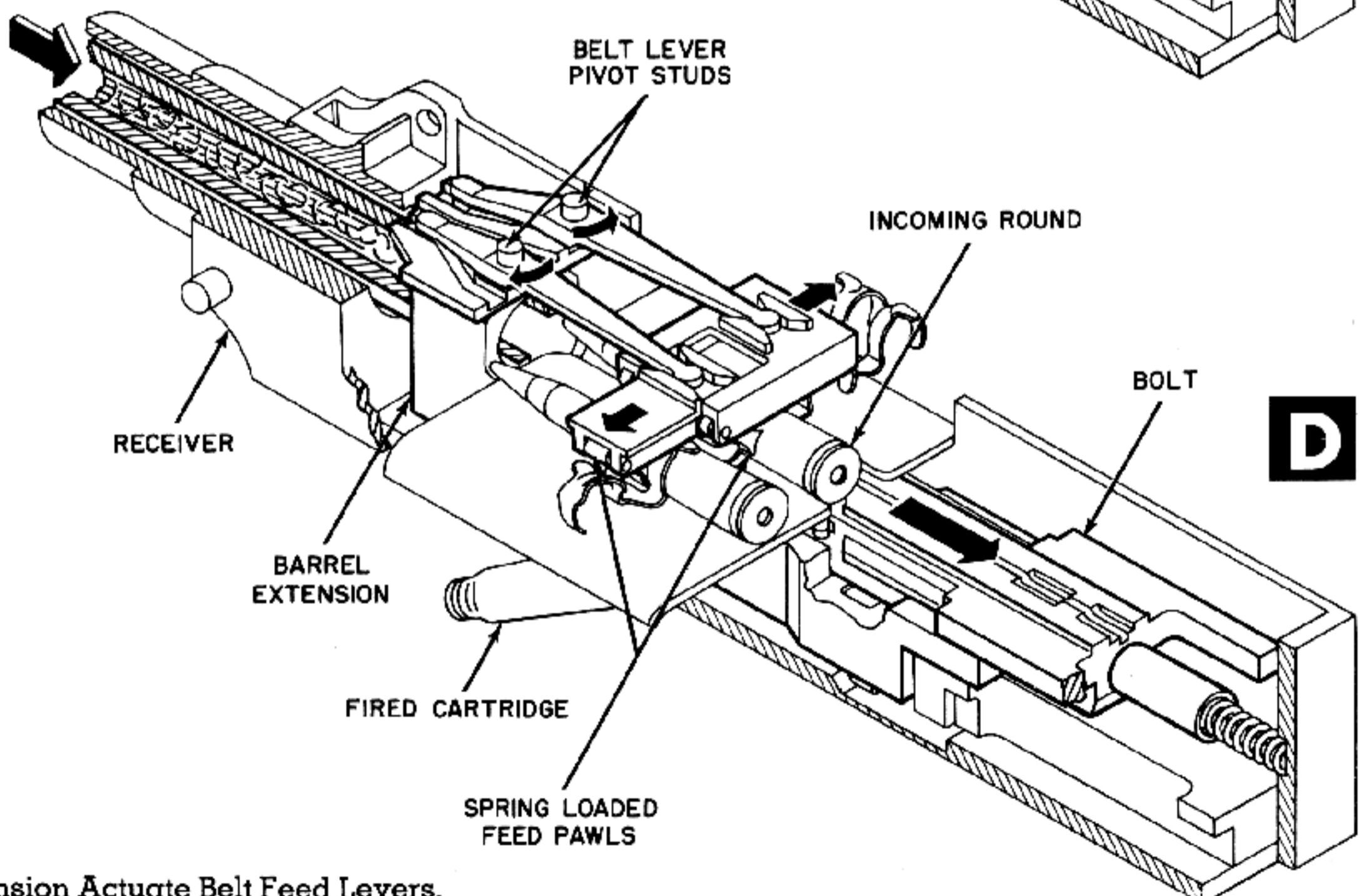
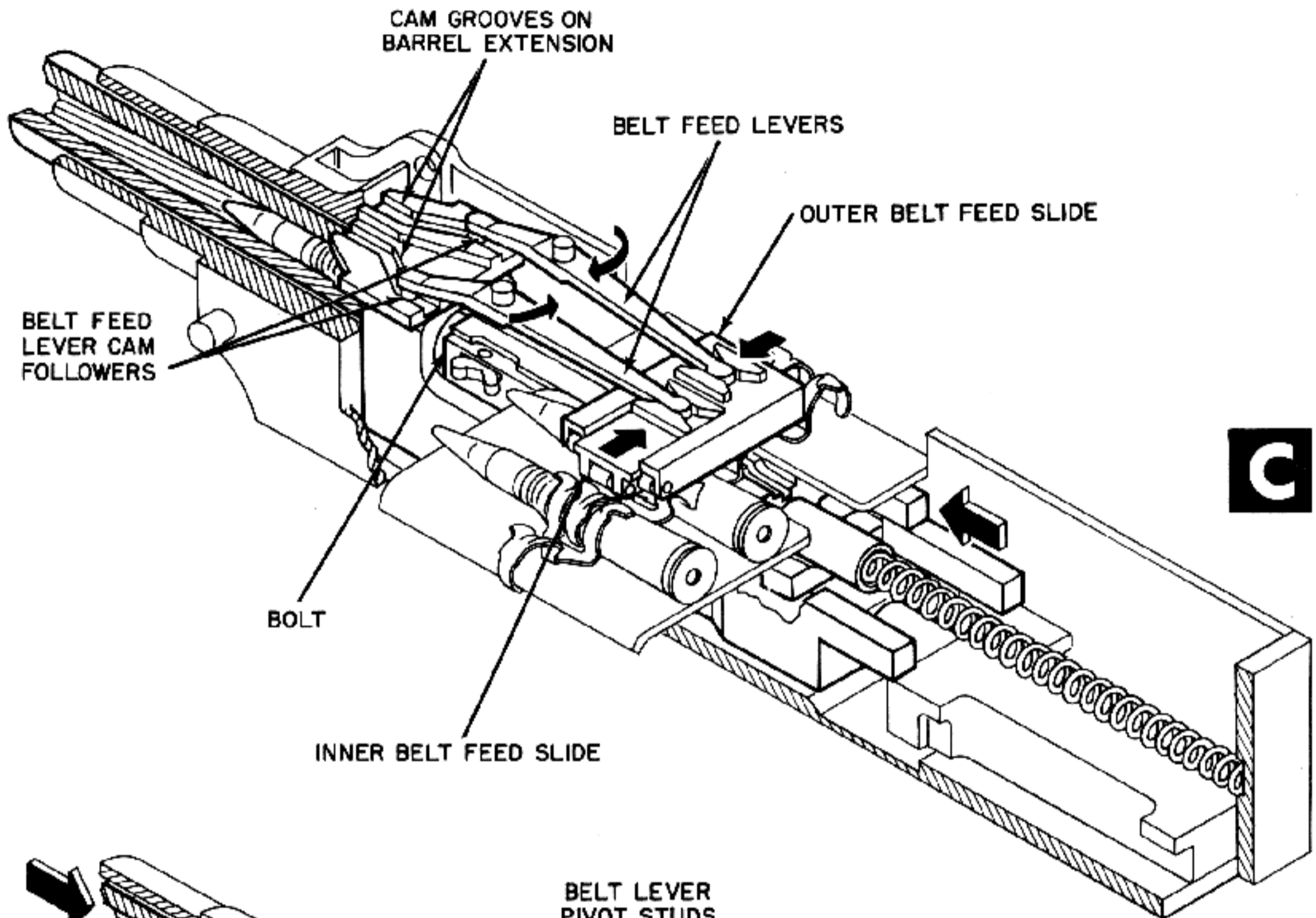


Figure 5-8. Cam Grooves in Barrel





Extension Actuate Belt Feed Levers.



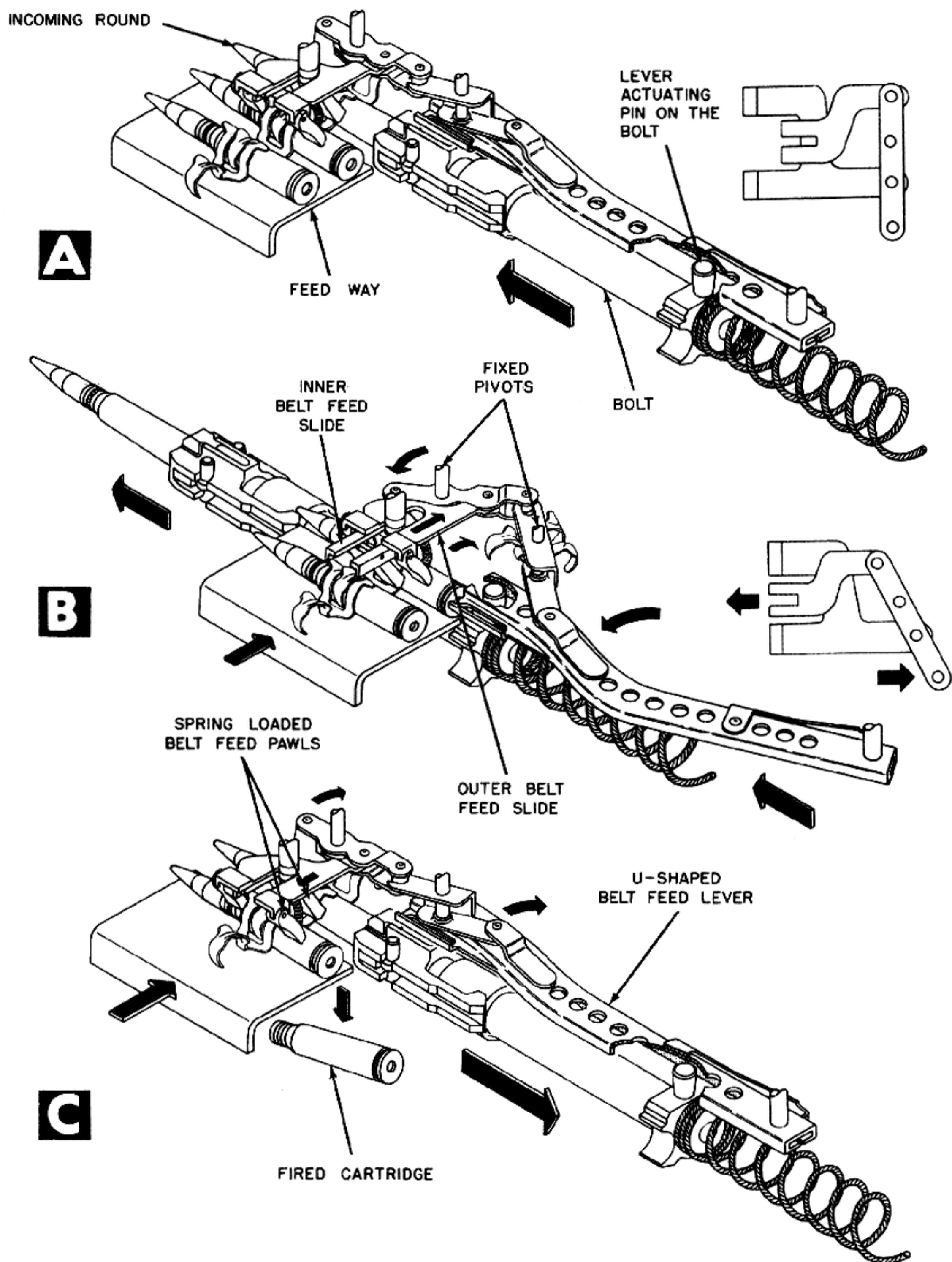


Figure 5-9. Pin on Bolt Actuates Belt Feed Lever.

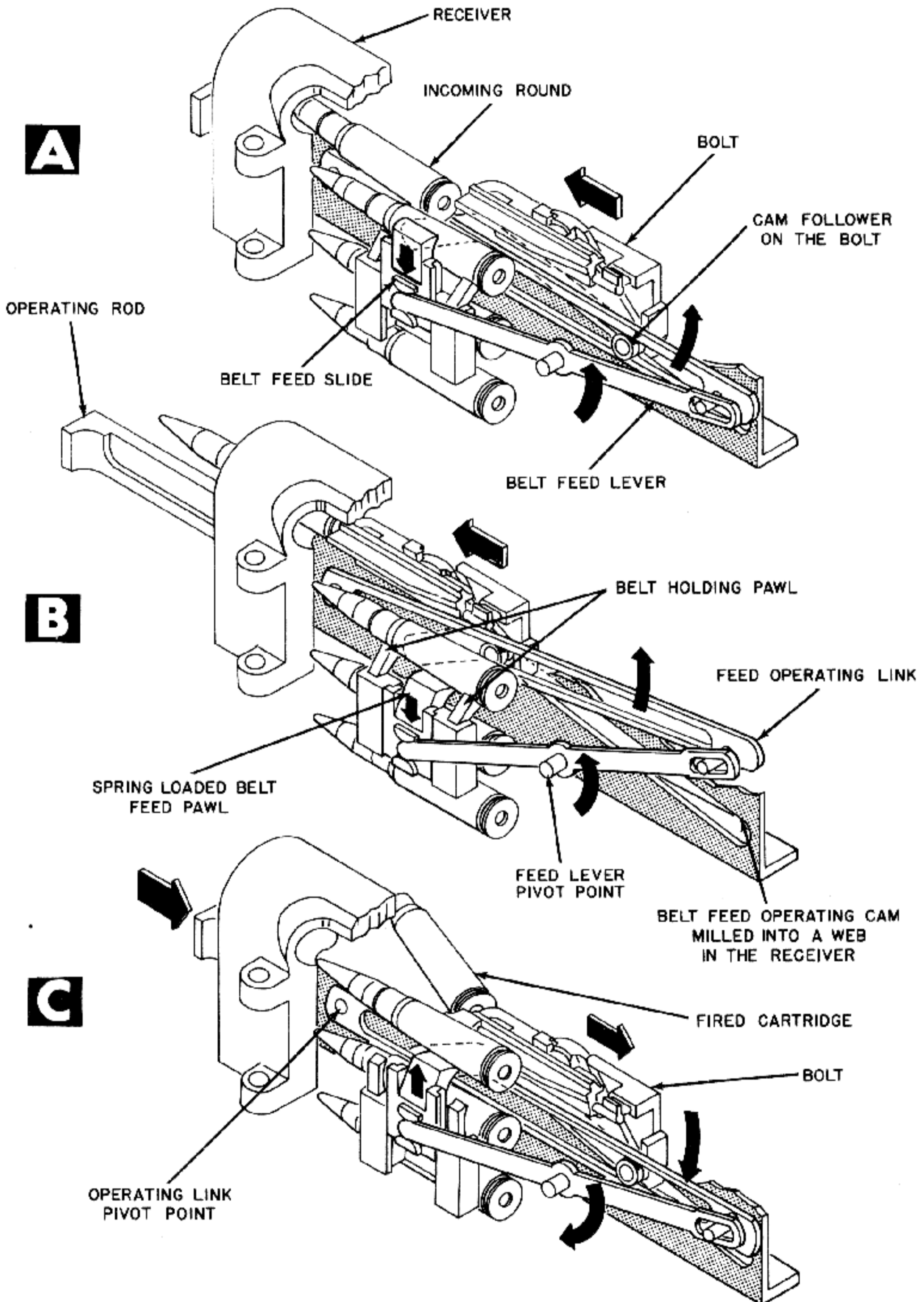


Figure 5-10. Cam Follower on Bolt Actuates Belt Feed Levers.

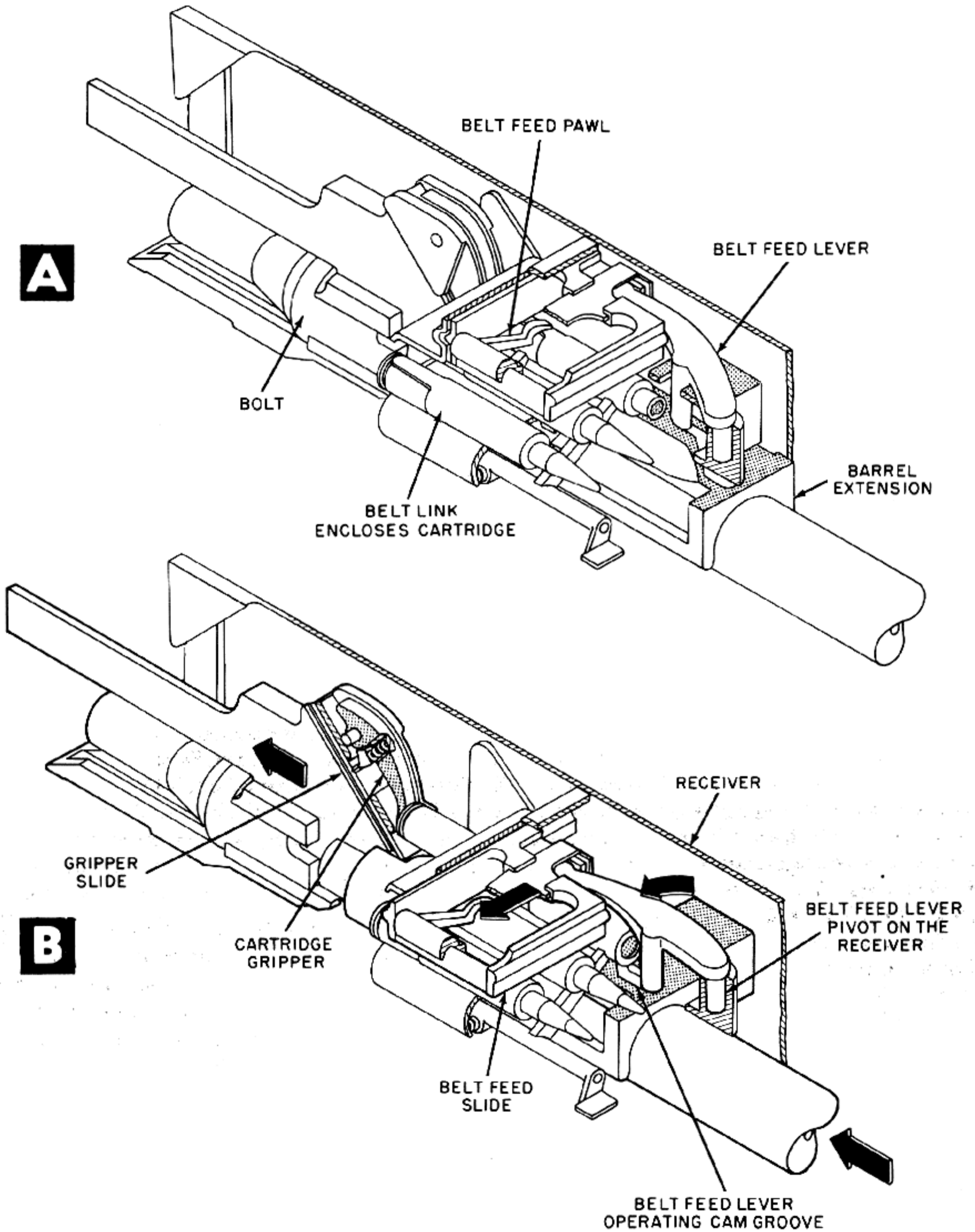
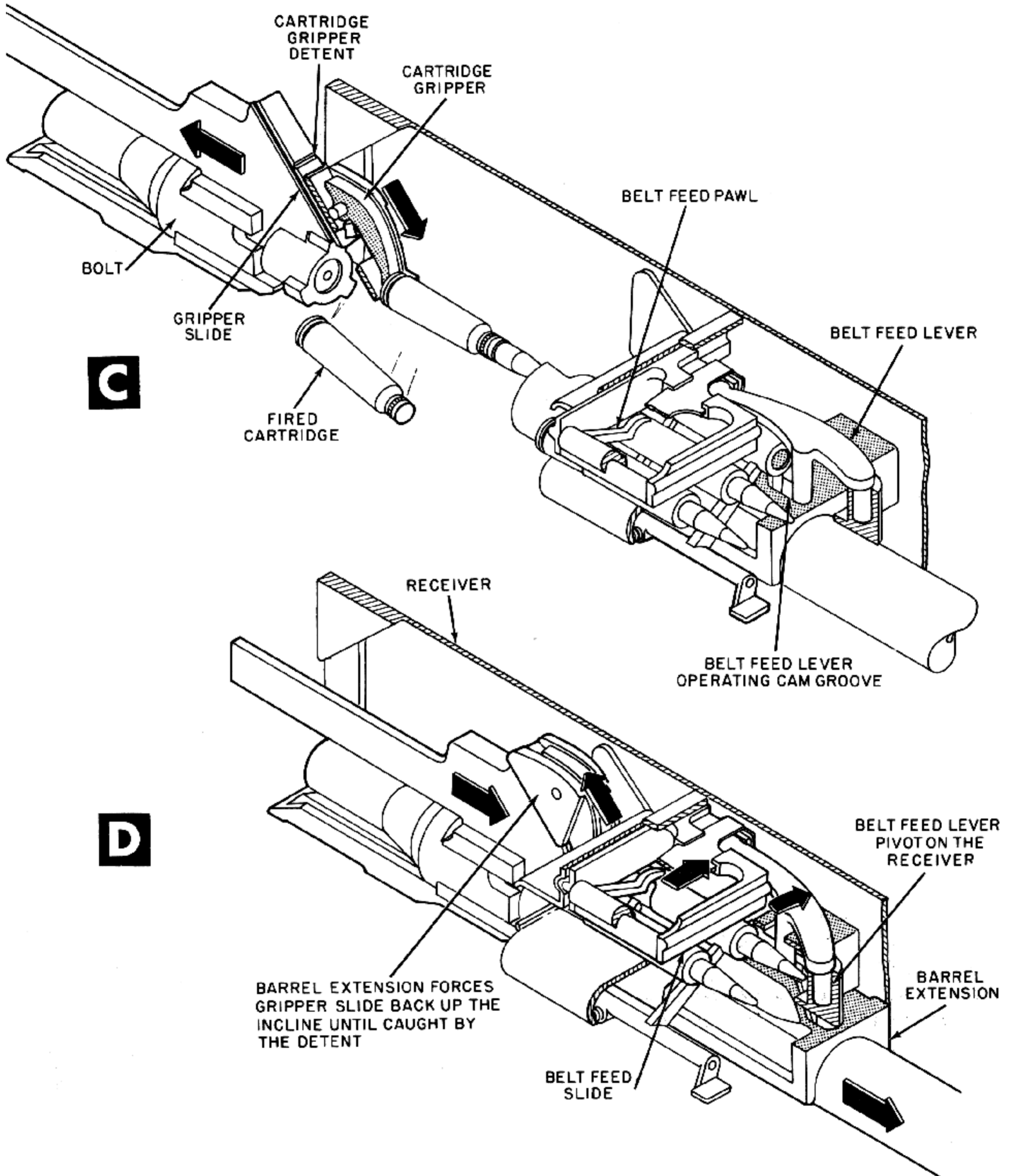


Figure 5-11. Cam Groove in Barrel



Extension Actuates Belt Feed Lever.



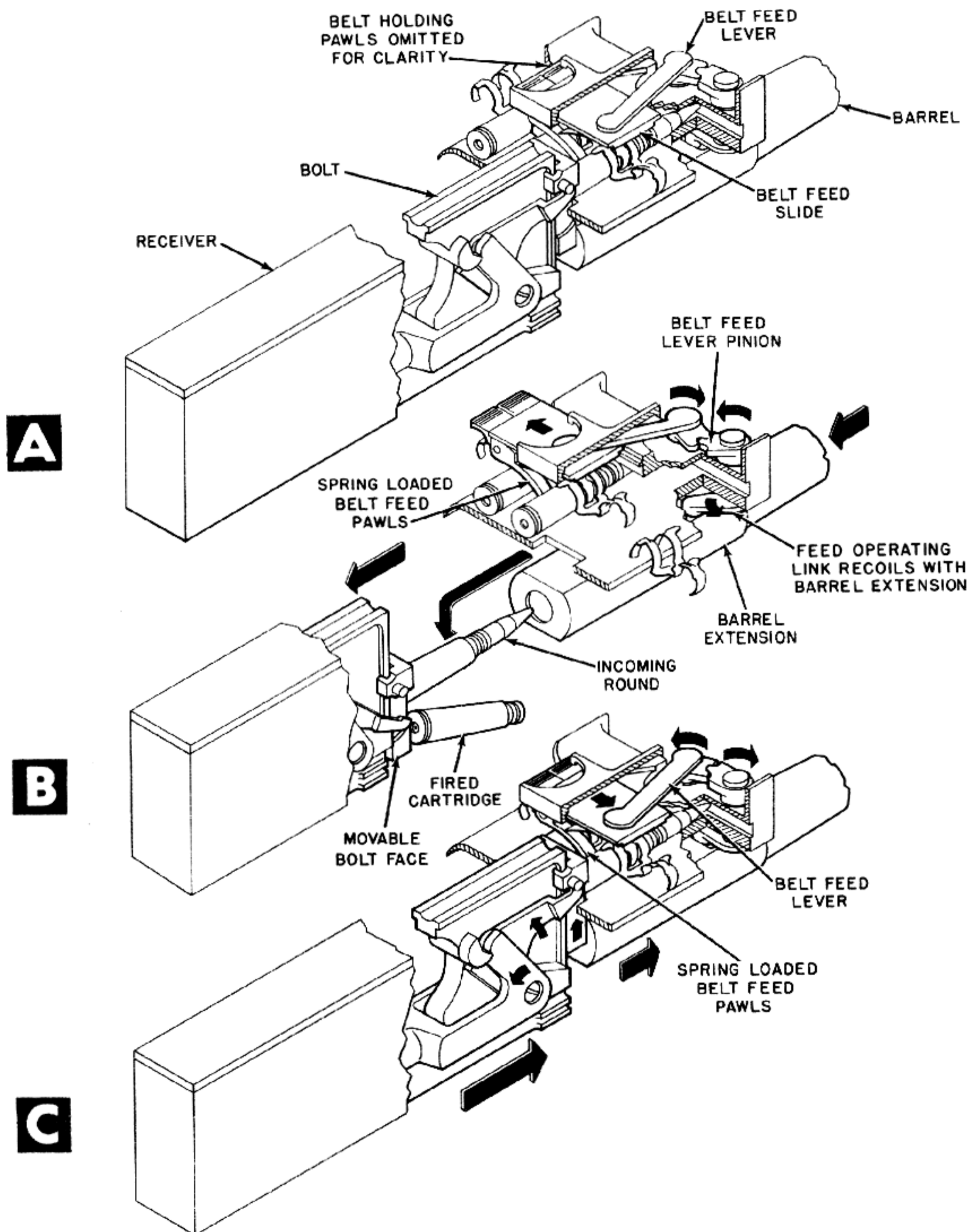


Figure 5-12. Recoiling Barrel Extension Actuates Belt Feed Levers.

B. Cam Operated

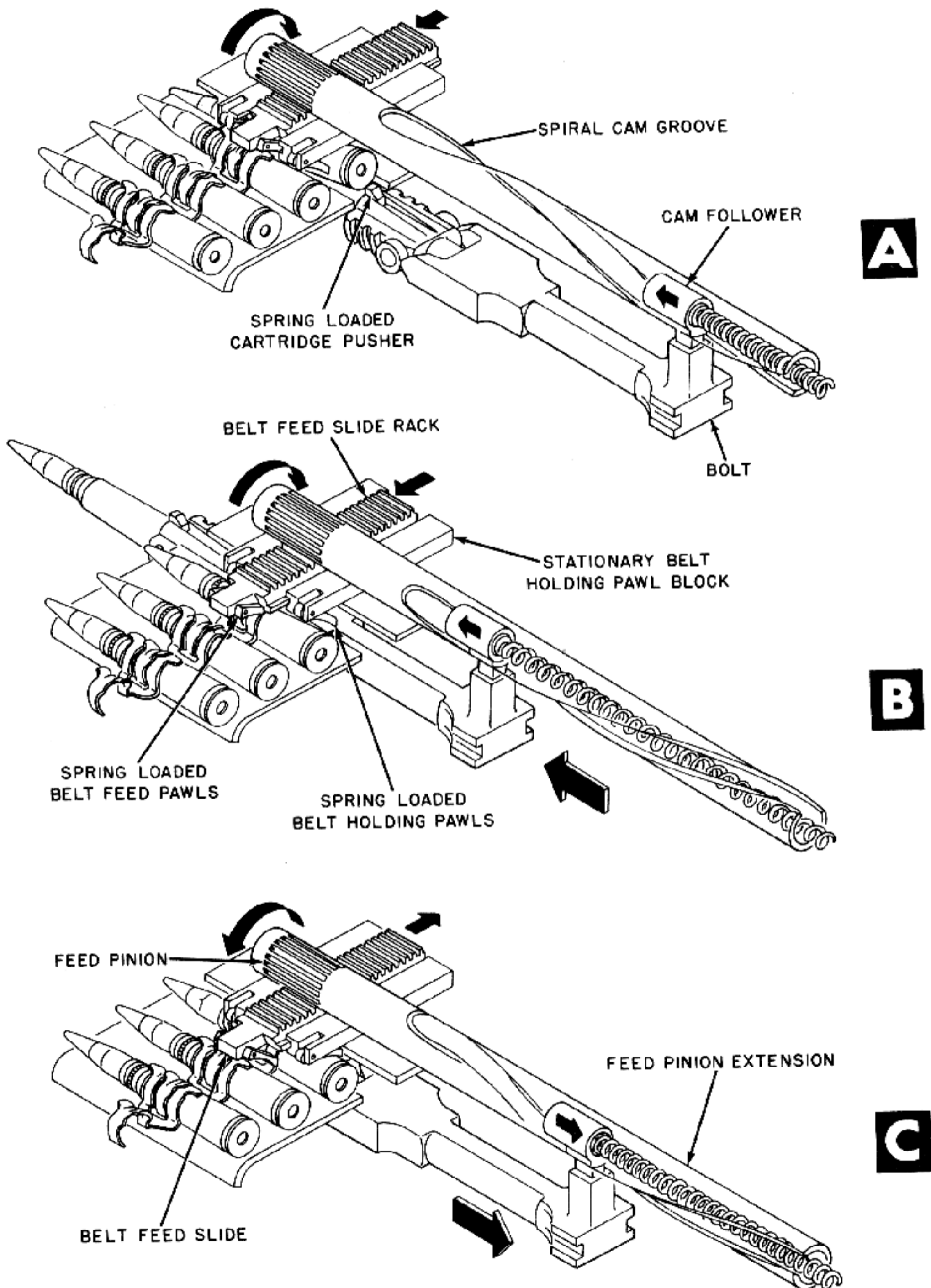


Figure 5-13. Follower on Bolt Rotates Feed Pinion Extension.

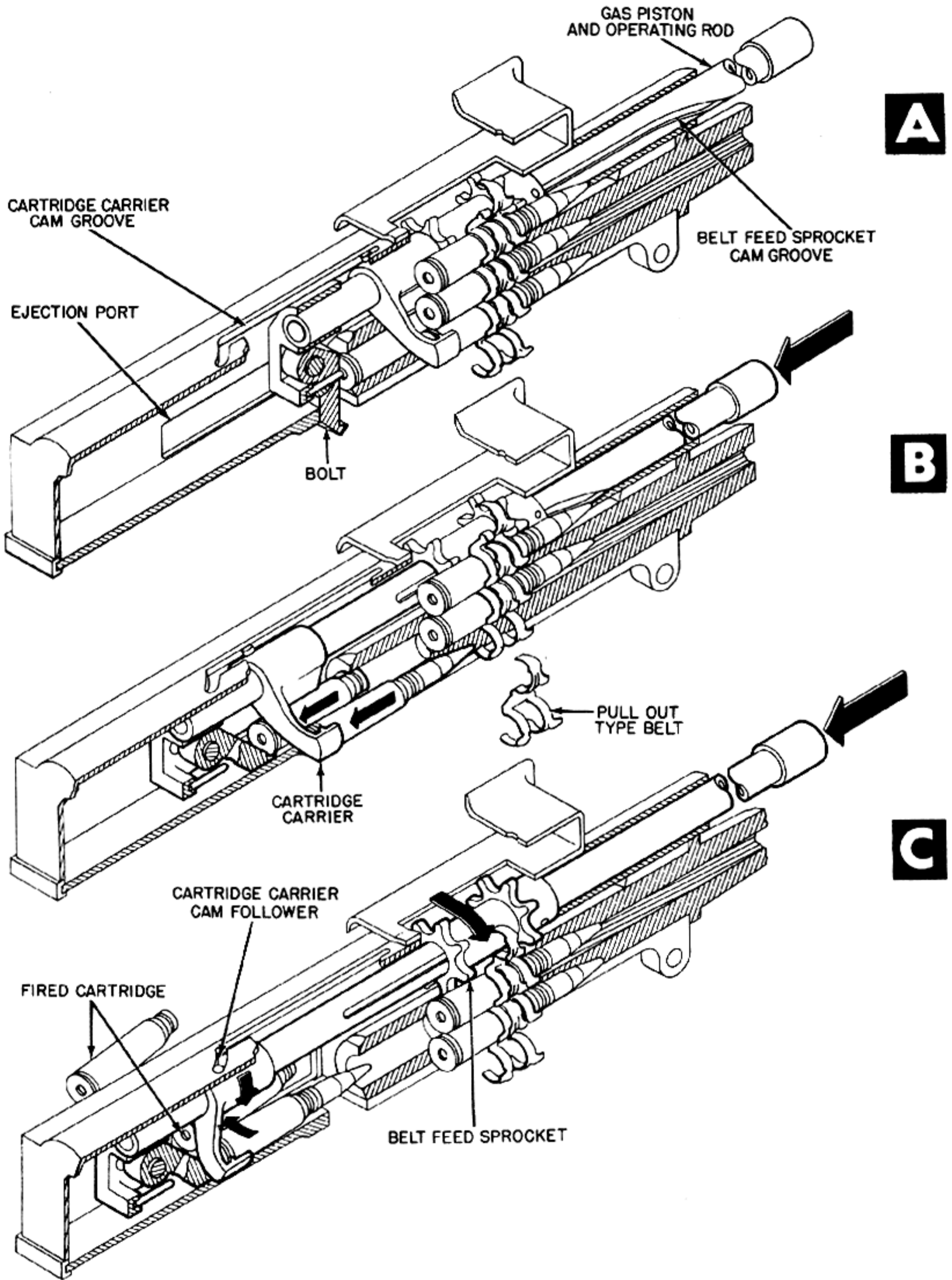


Figure 5-14. Piston Operated Feed Sprocket.

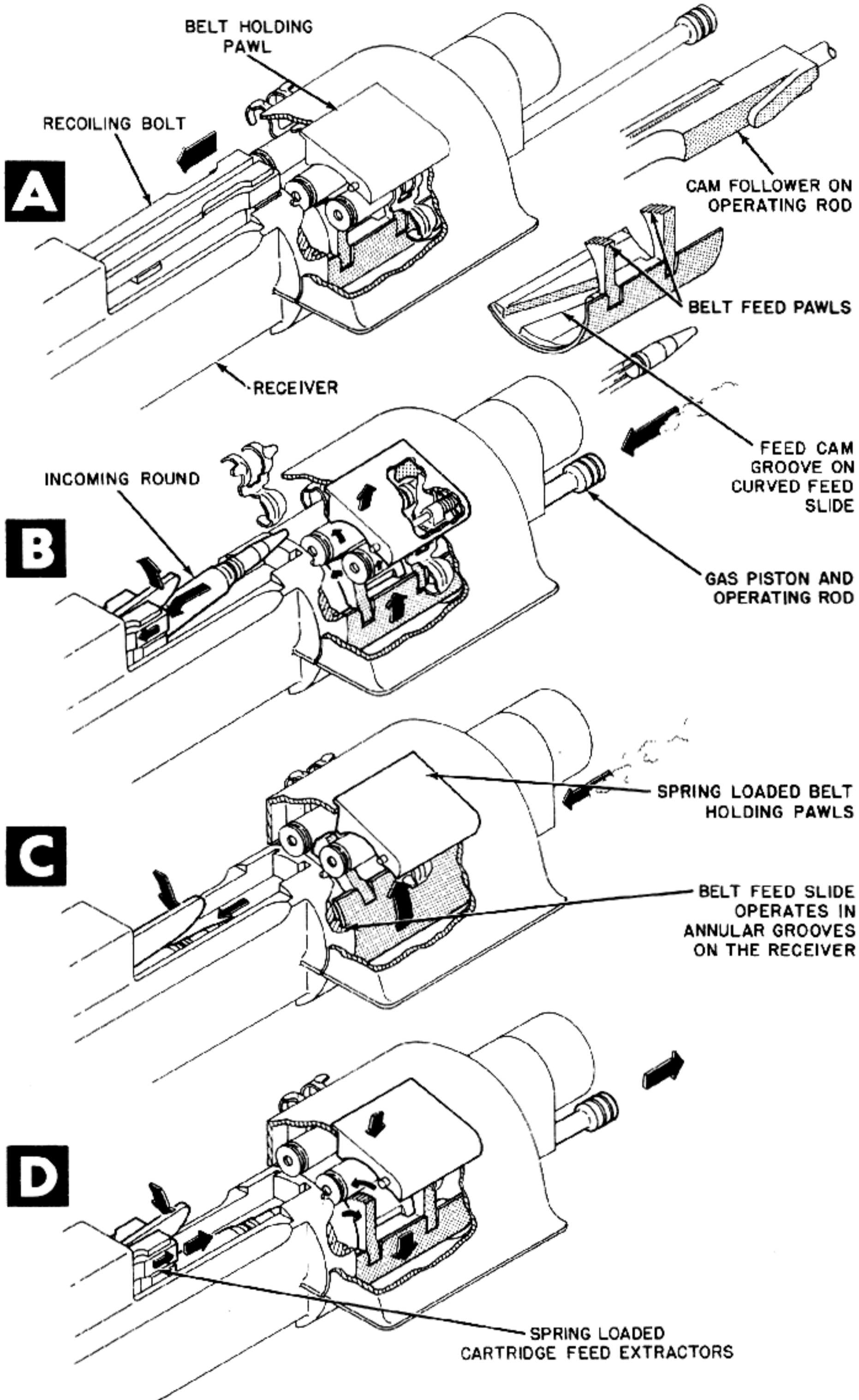


Figure 5-15. Cam on Operating Rod Rotates Belt Feed Slide.



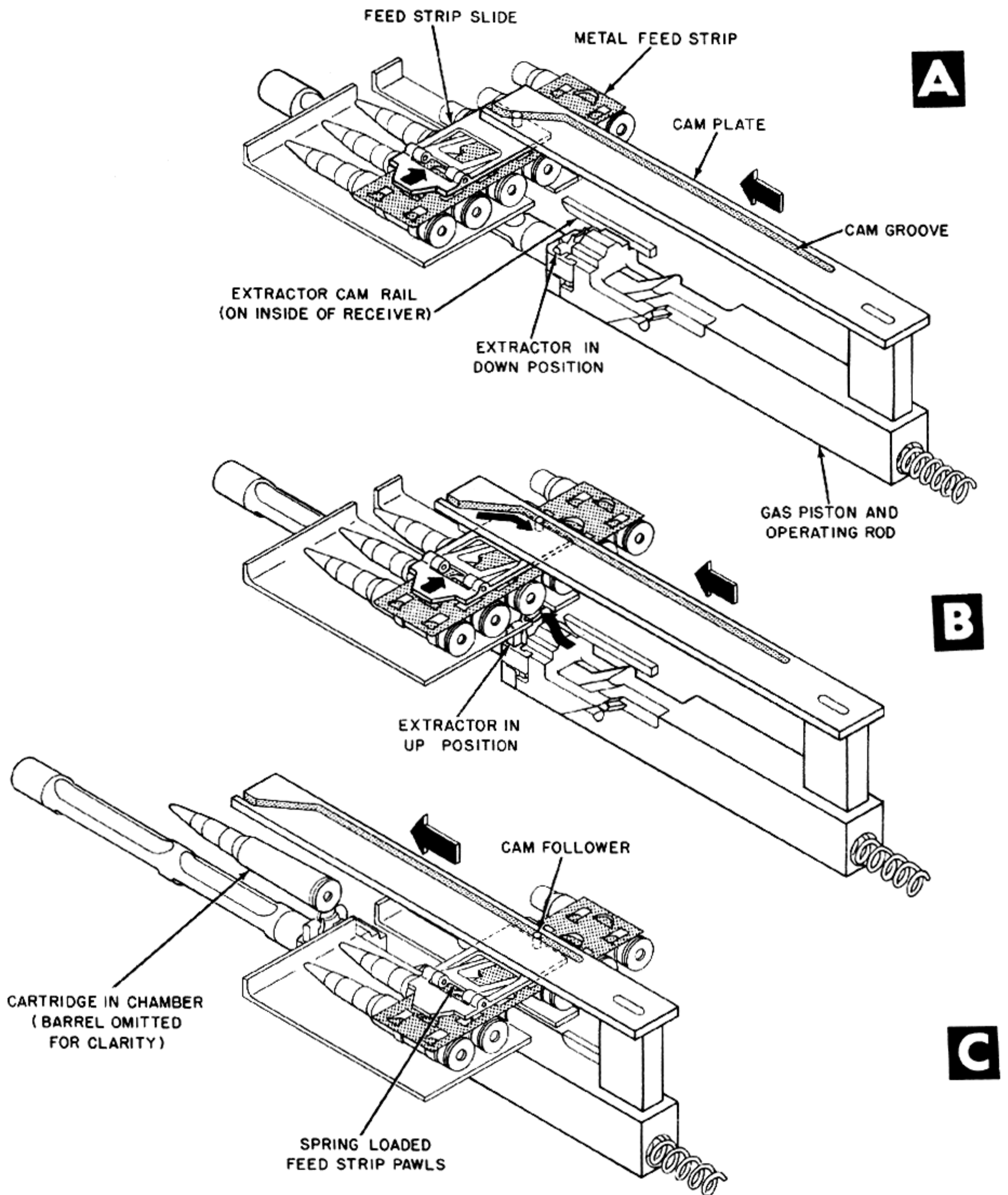
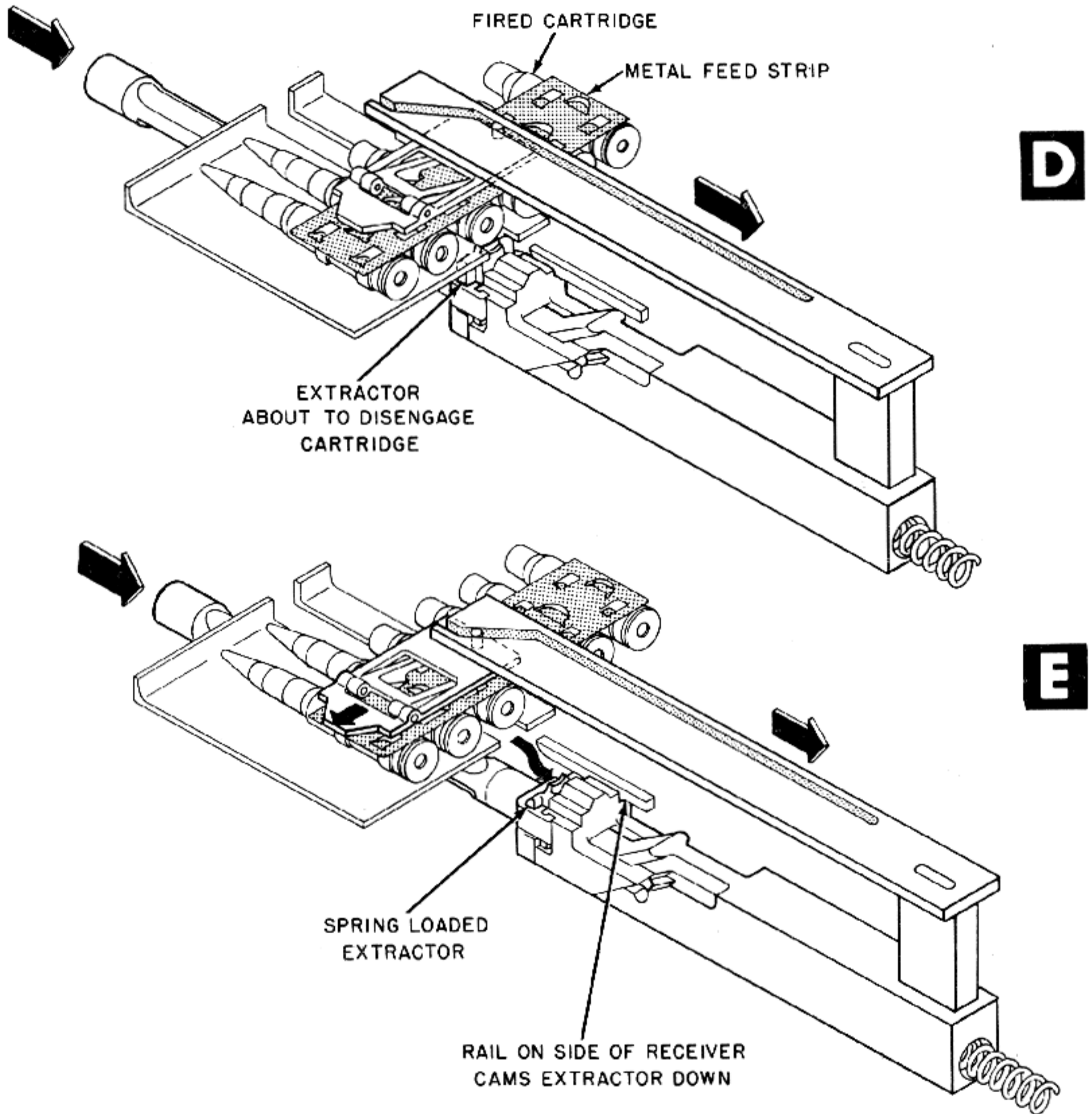
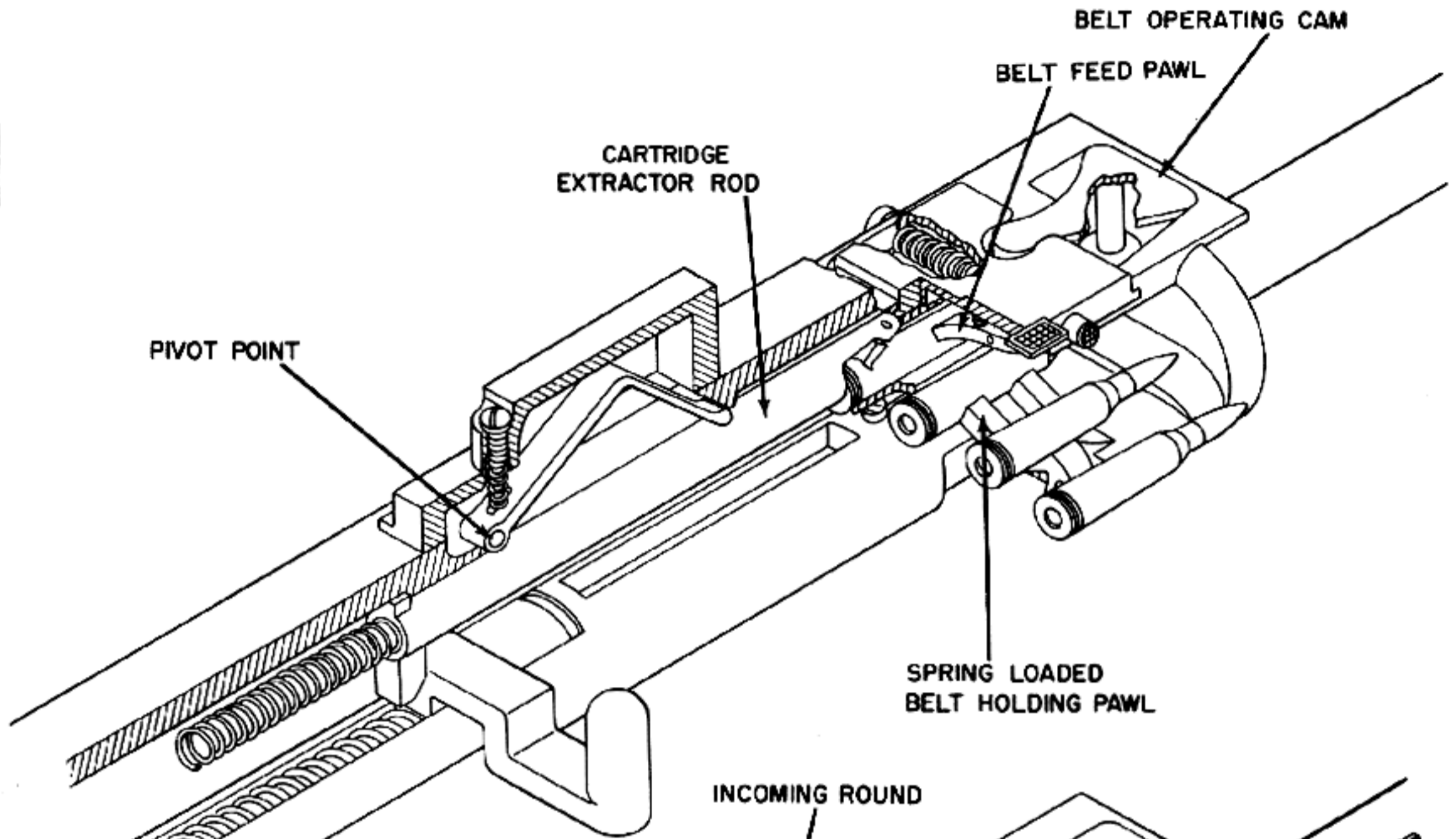


Figure 5-16. Cam Plate Attached to Operating



Rod Actuates Feed Strip Slide.

**A**



**B**

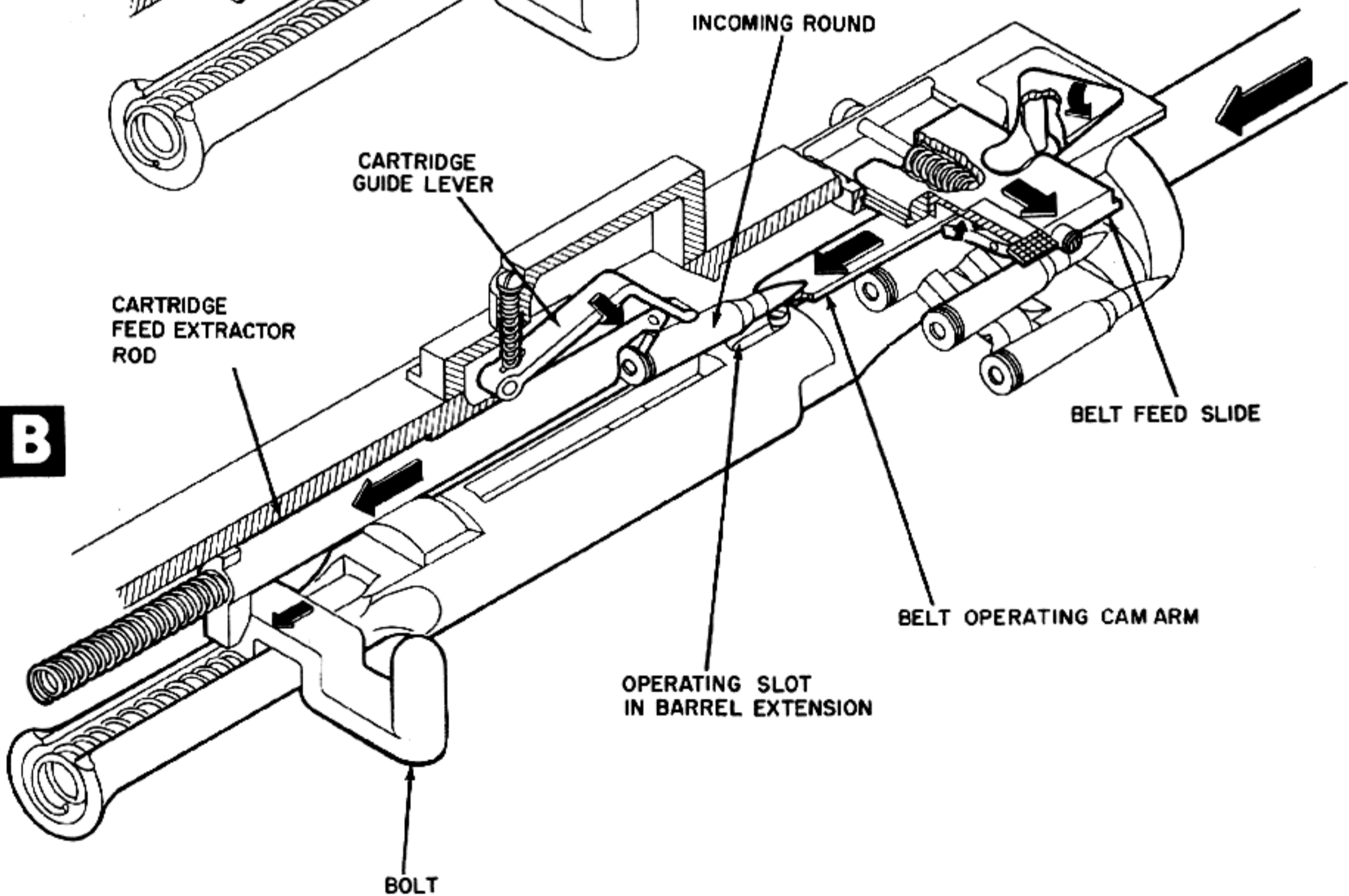
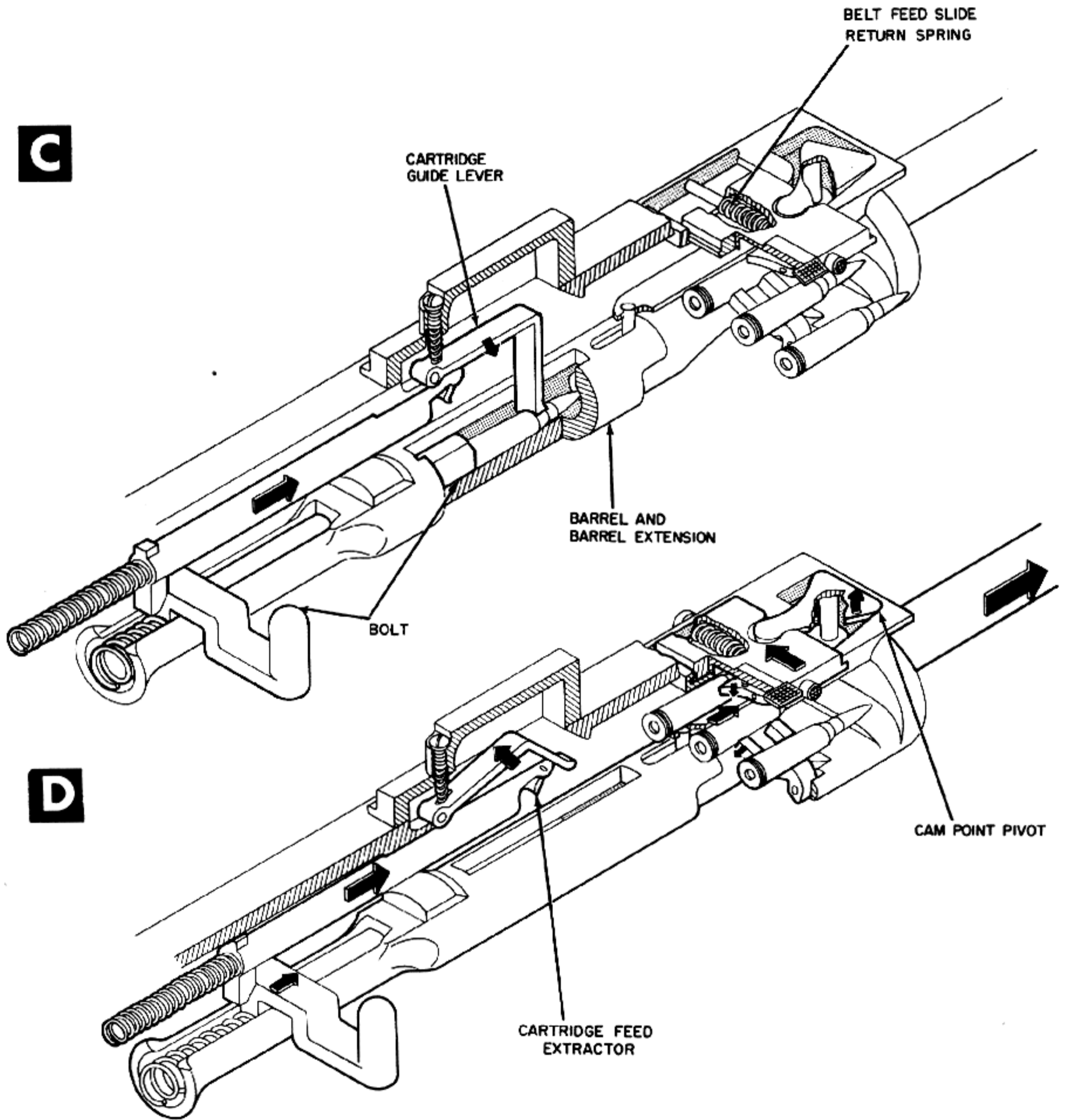


Figure 5-17. Recoiling Barrel Extension



Actuates Belt Feed Slide.



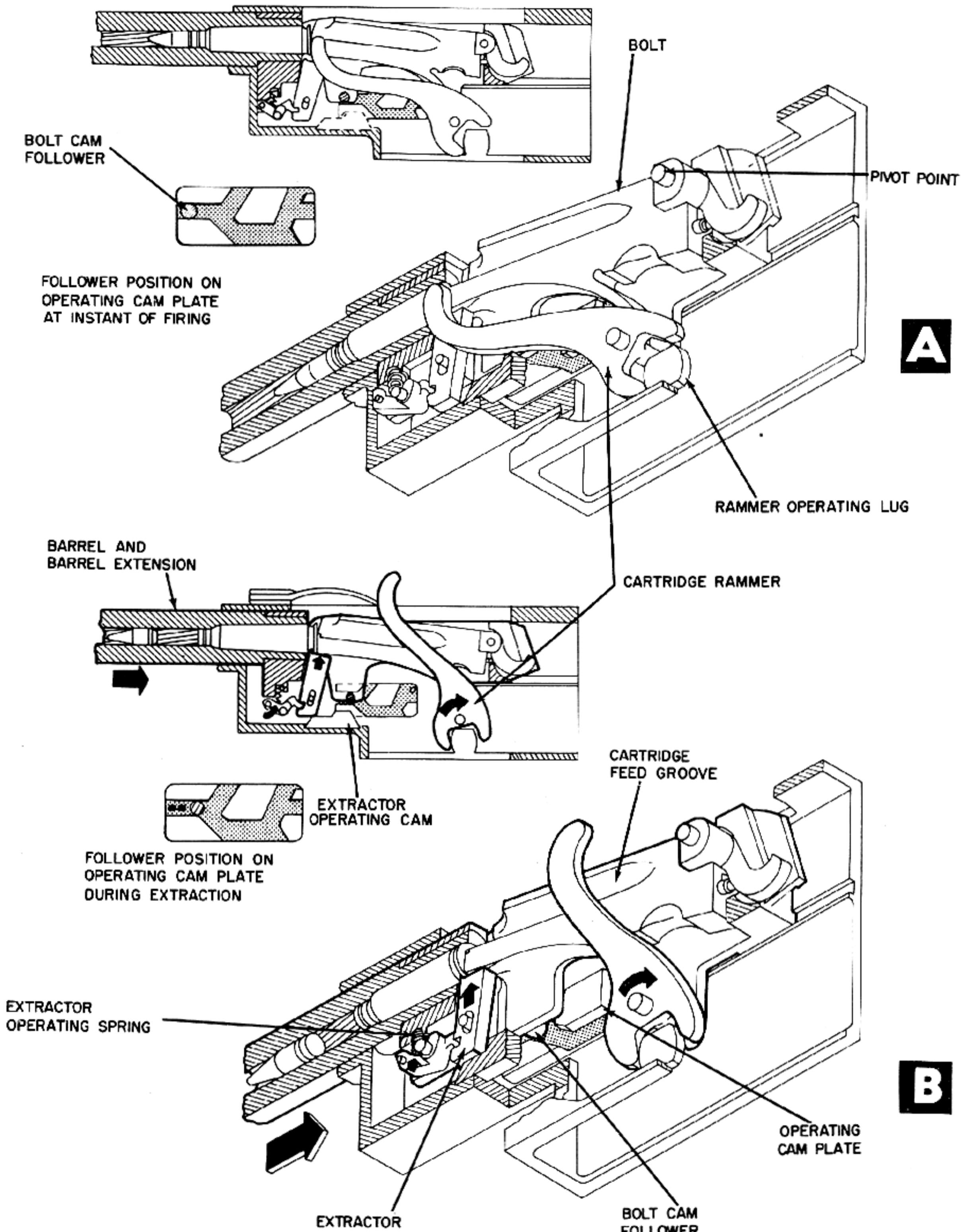
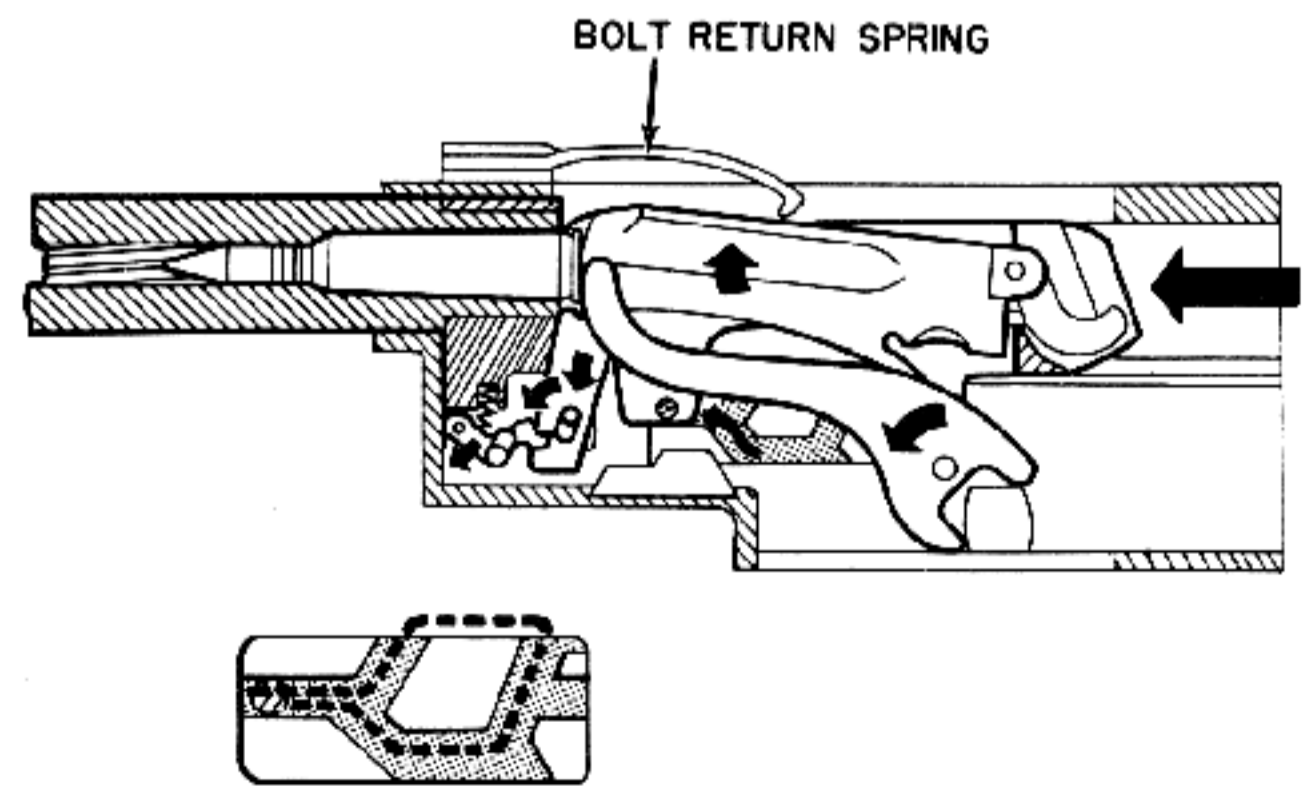
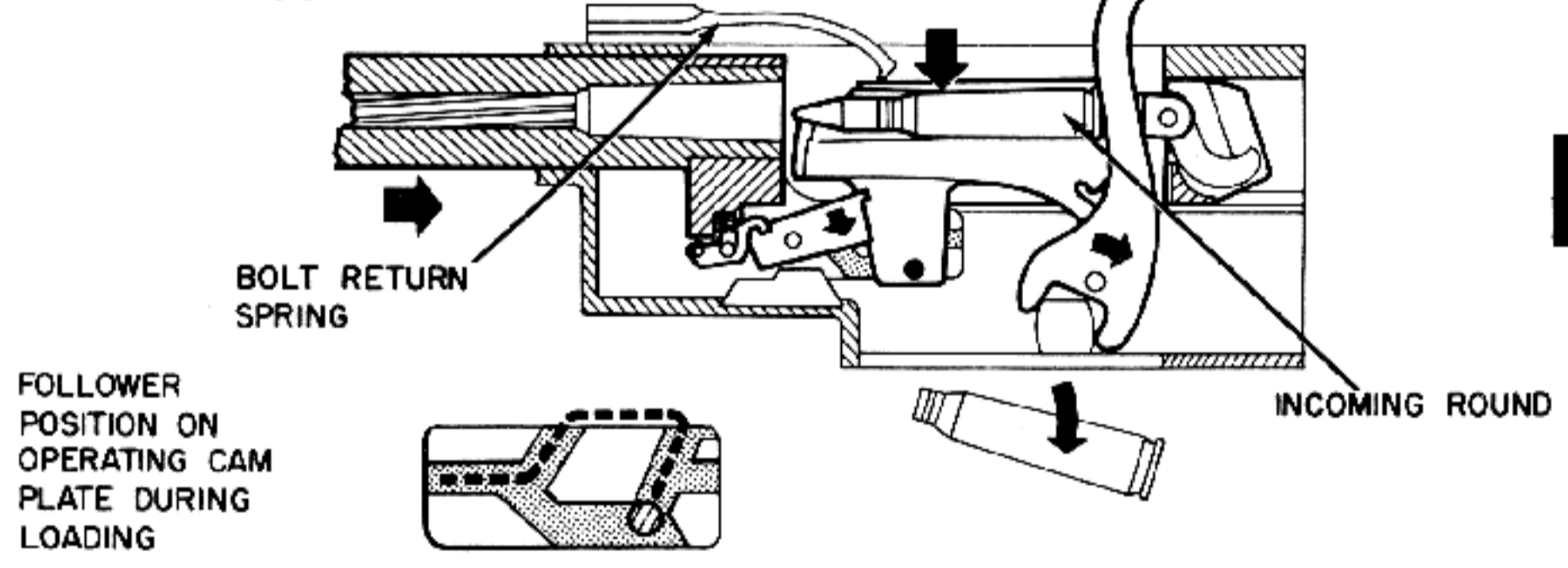
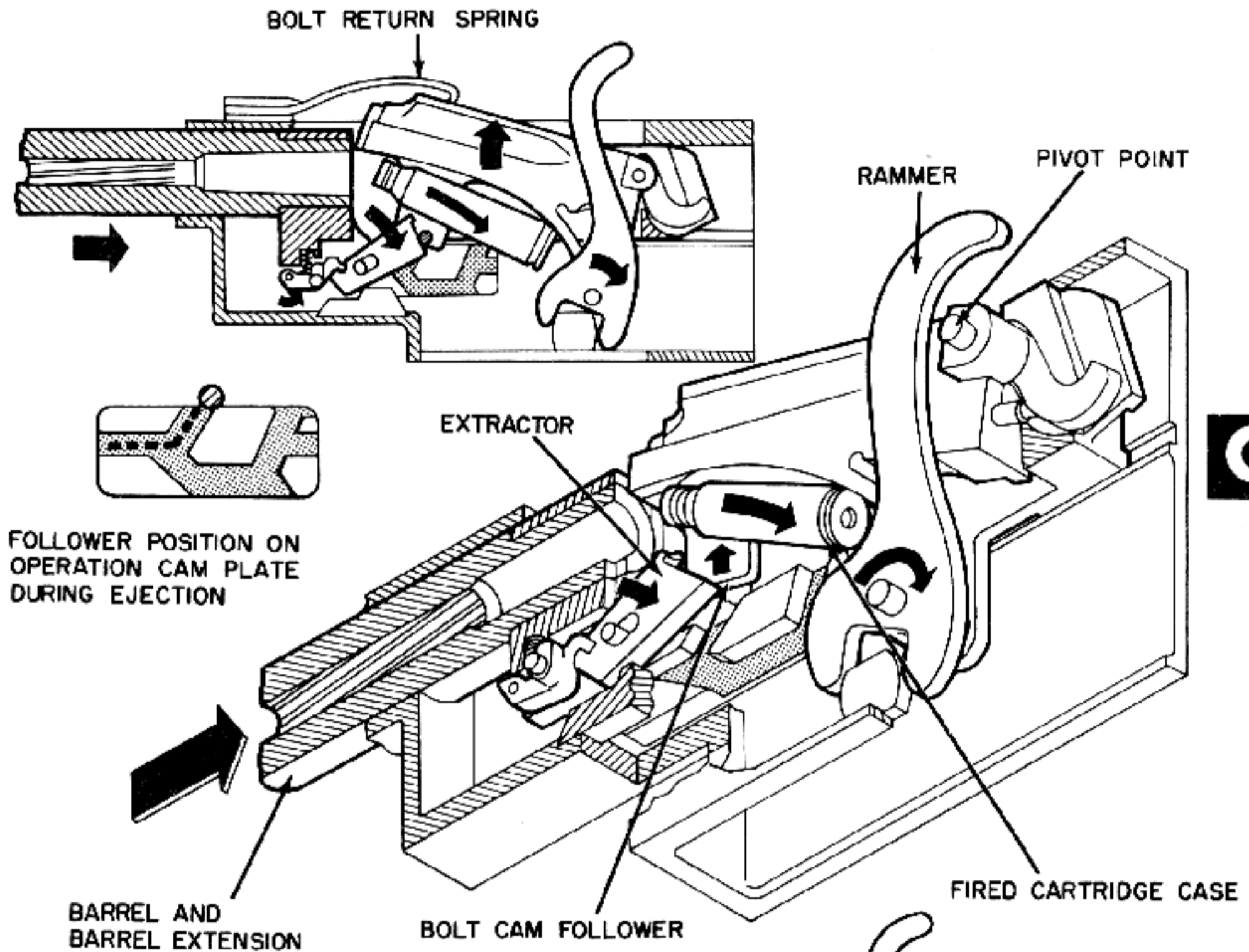


Figure 5-18. Lug on Receiver Operates



Cartridge Rammer.

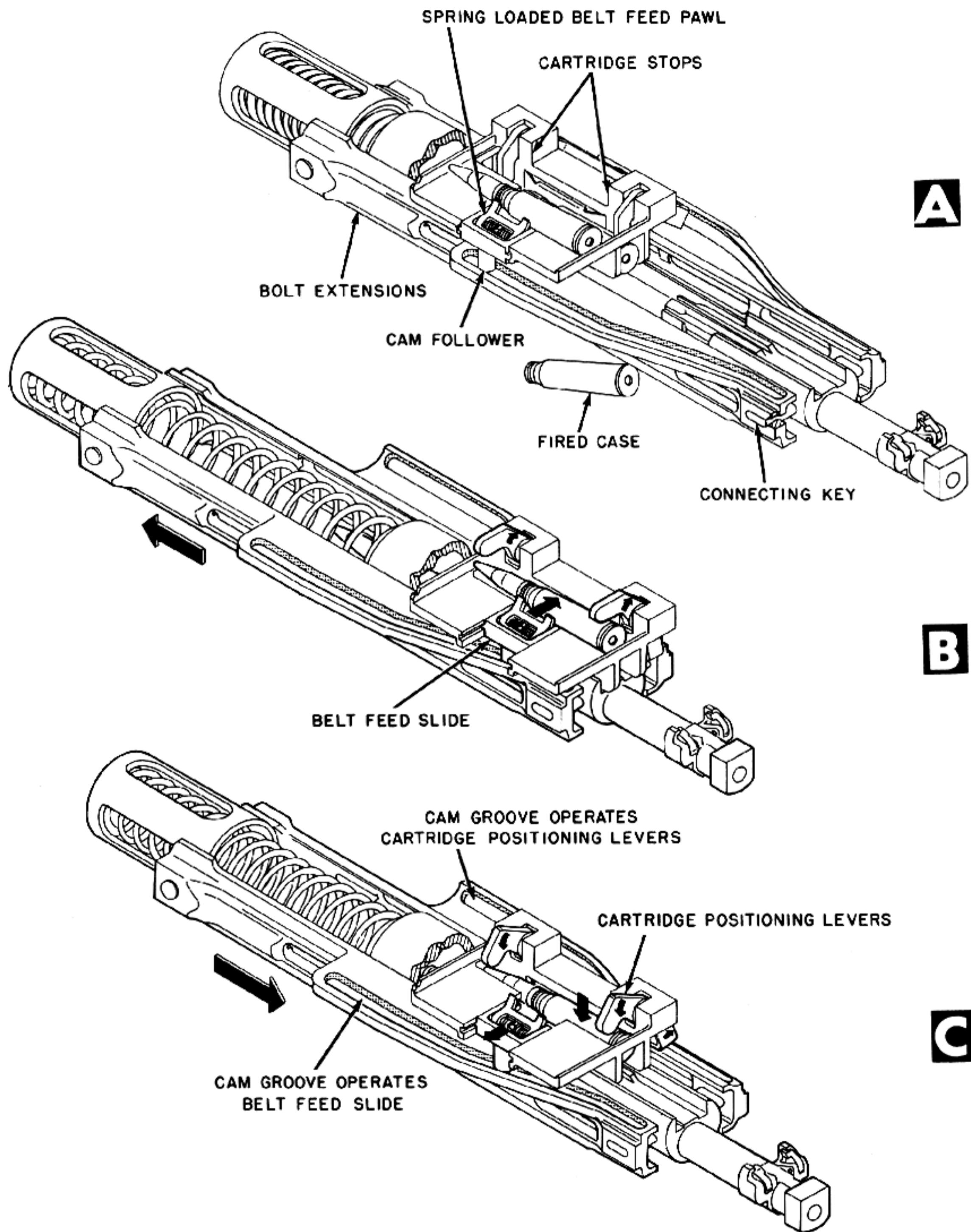


Figure 5-19. Cam Grooves in Bolt Extension Actuate Belt Feed Slide and Cartridge Positioning Lever.



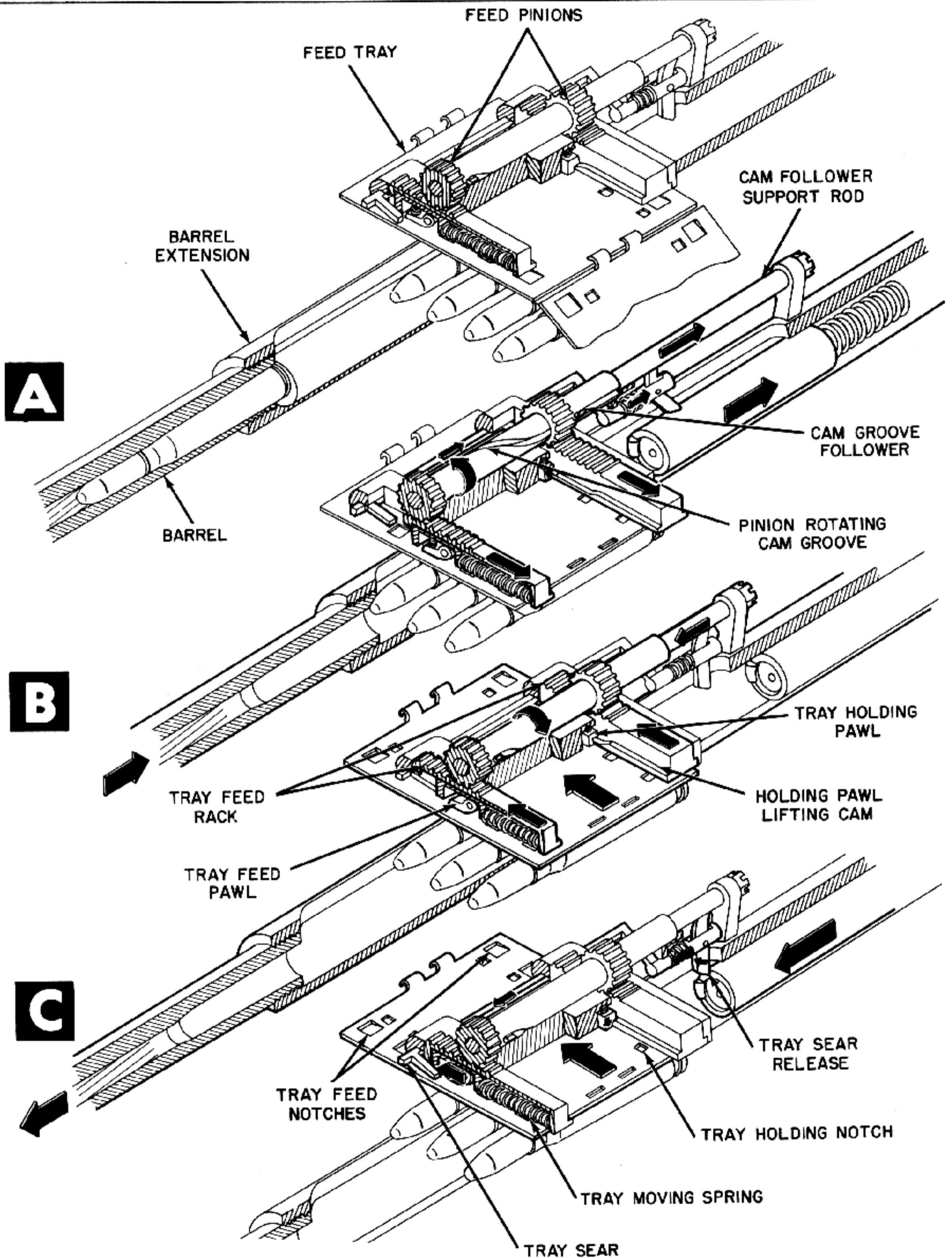


Figure 5-20. Recoiling Barrel Extension Operates Feed Pinions.



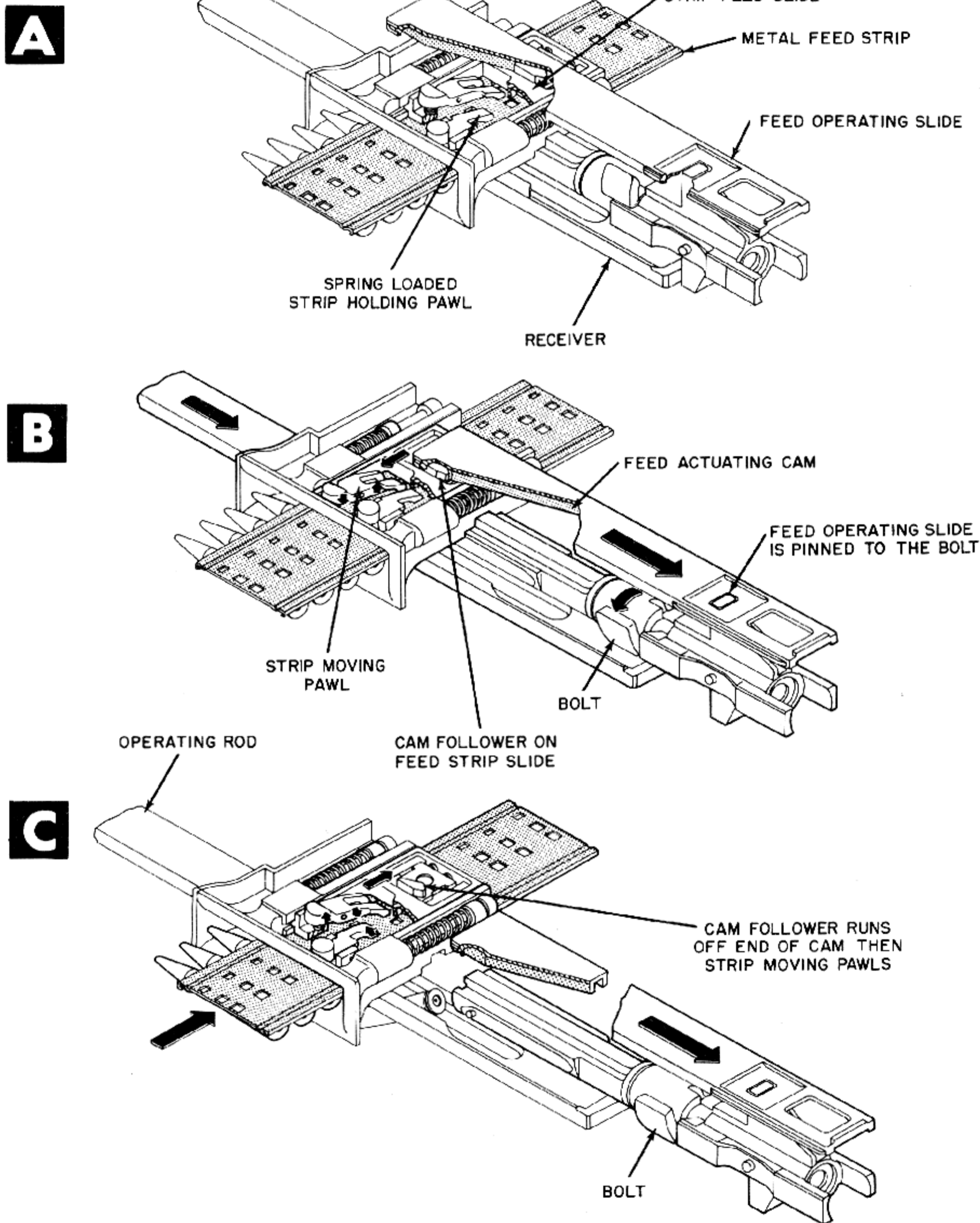


Figure 5-21. Feed Strip Slide Is Actuated by Recoiling Cam Plate and Springs.

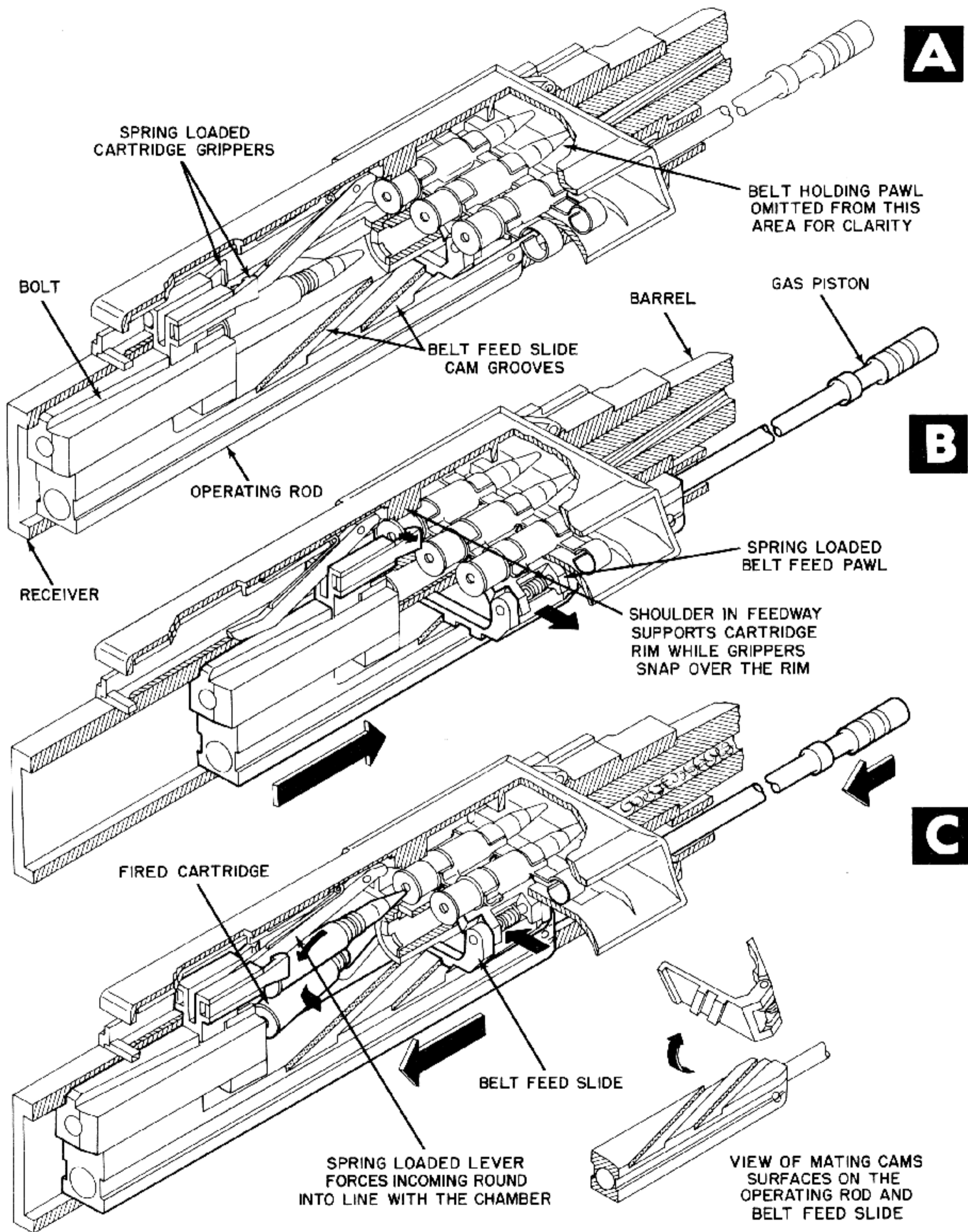


Figure 5-22. Cam Grooves on Operating Rod Actuate Belt Feed Slide.

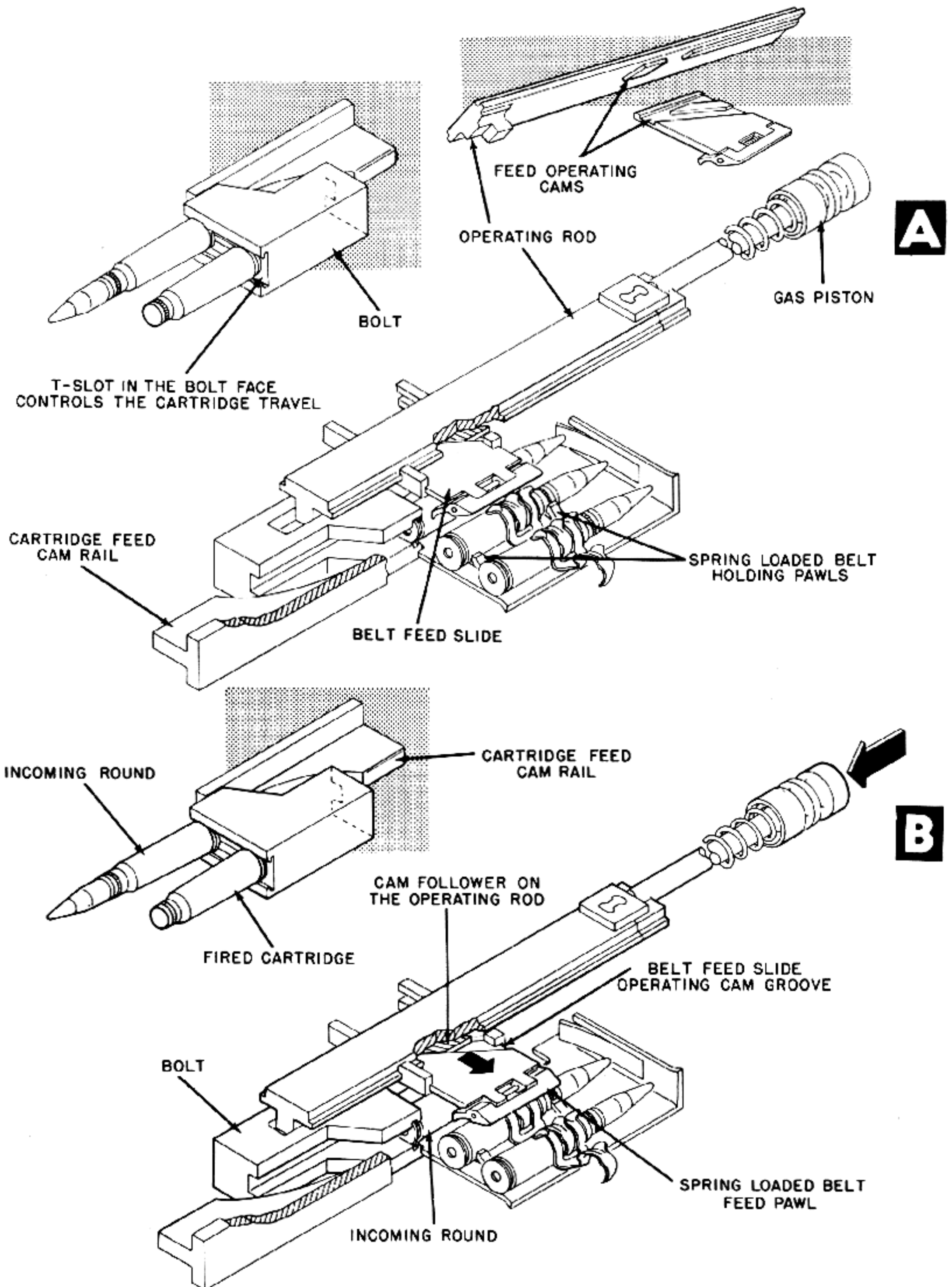
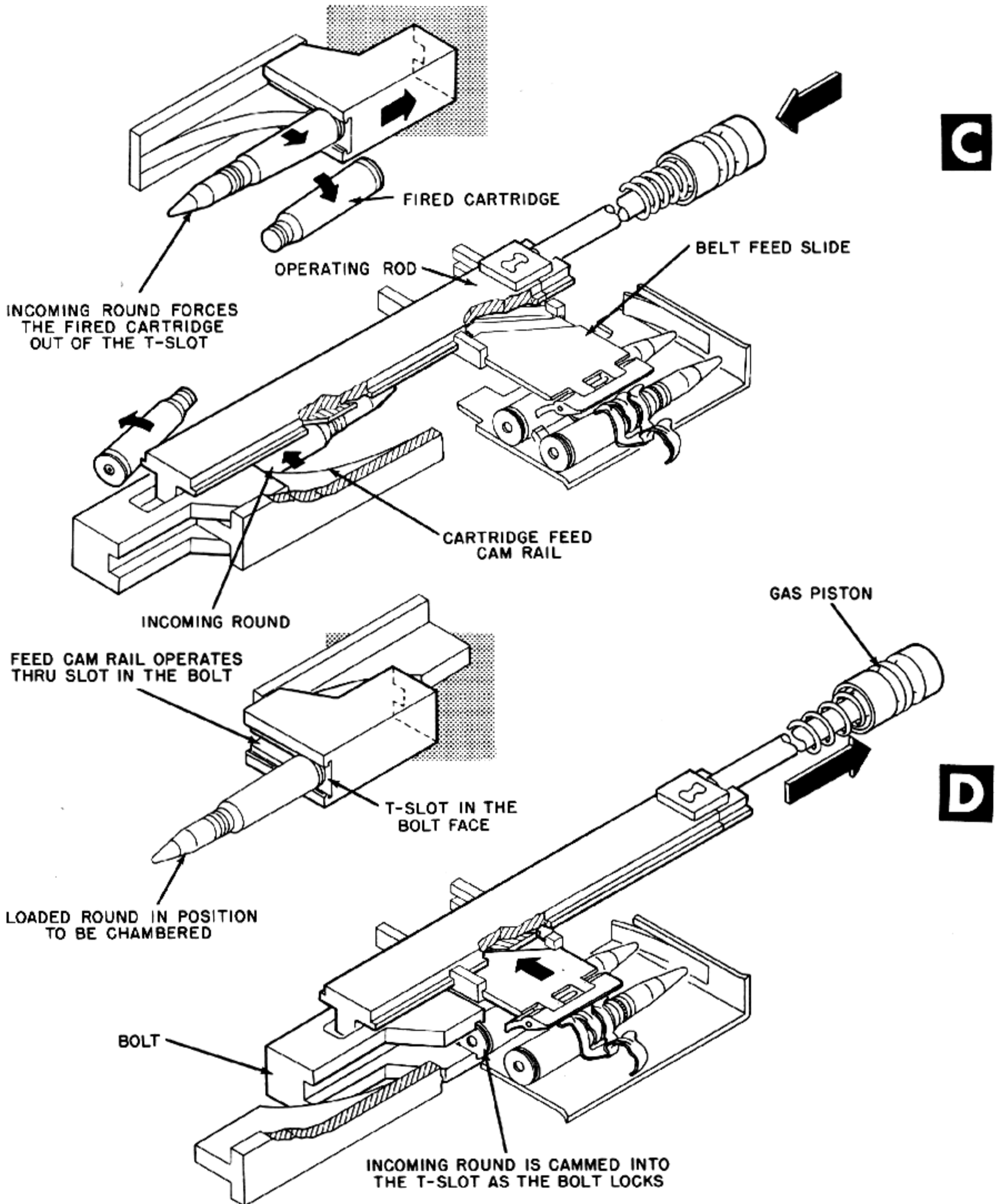


Figure 5-23. Cam on Operating Rod





Actuates Belt Feed Slide.

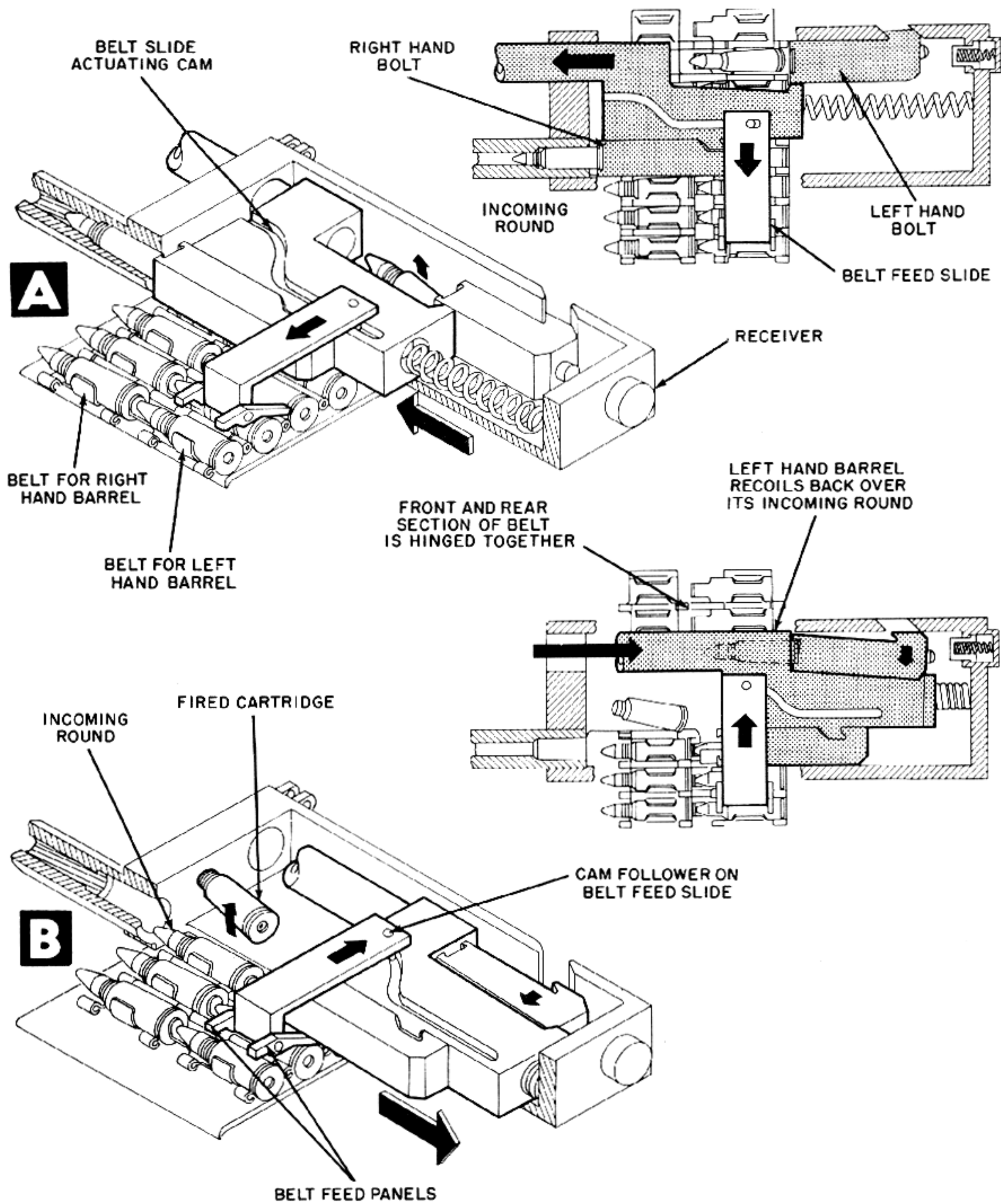
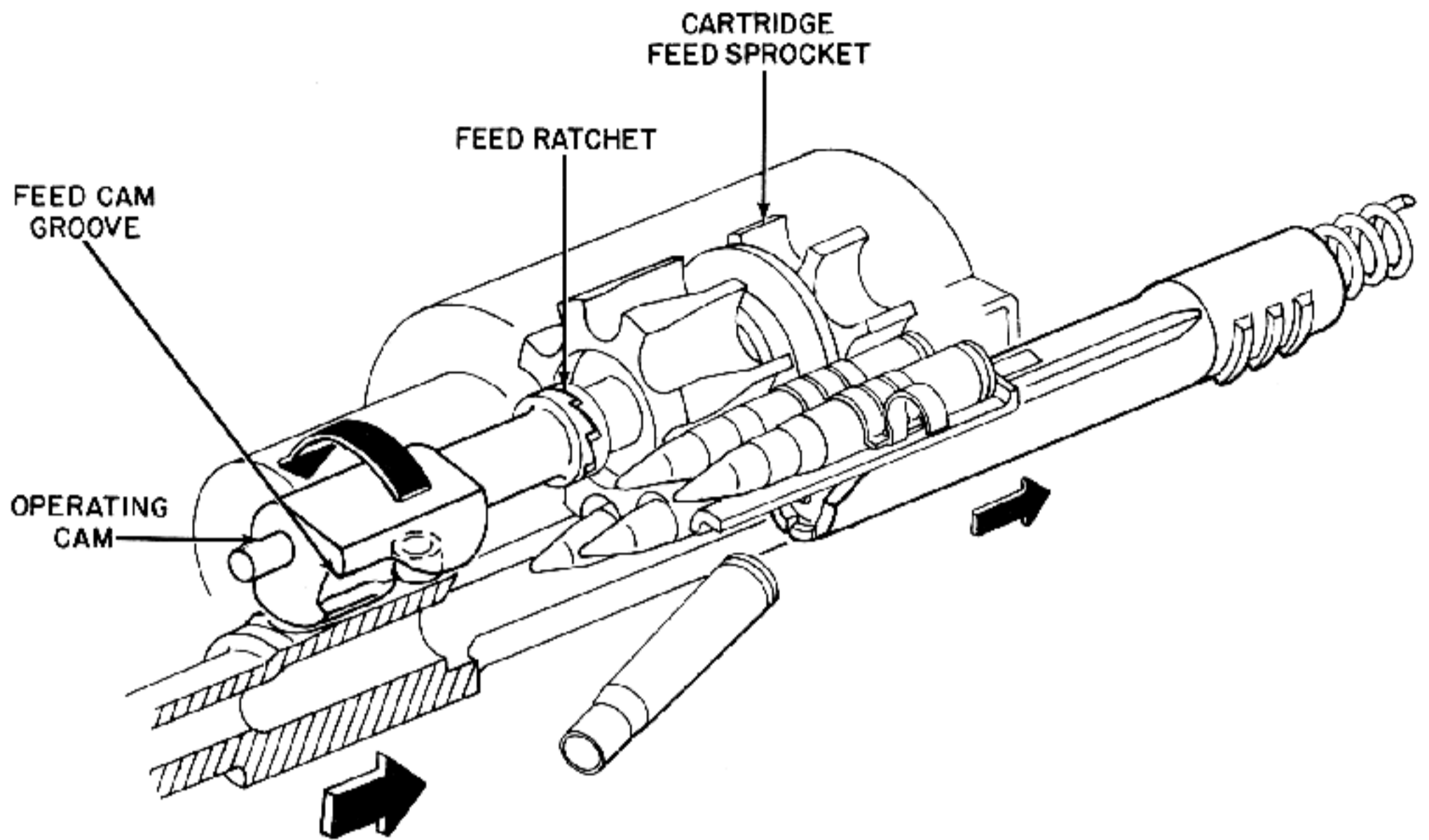


Figure 5-24. Recoiling Barrel Extension Actuates Belt Feed Slide.

C. Sprocket Type

**A**



**B**

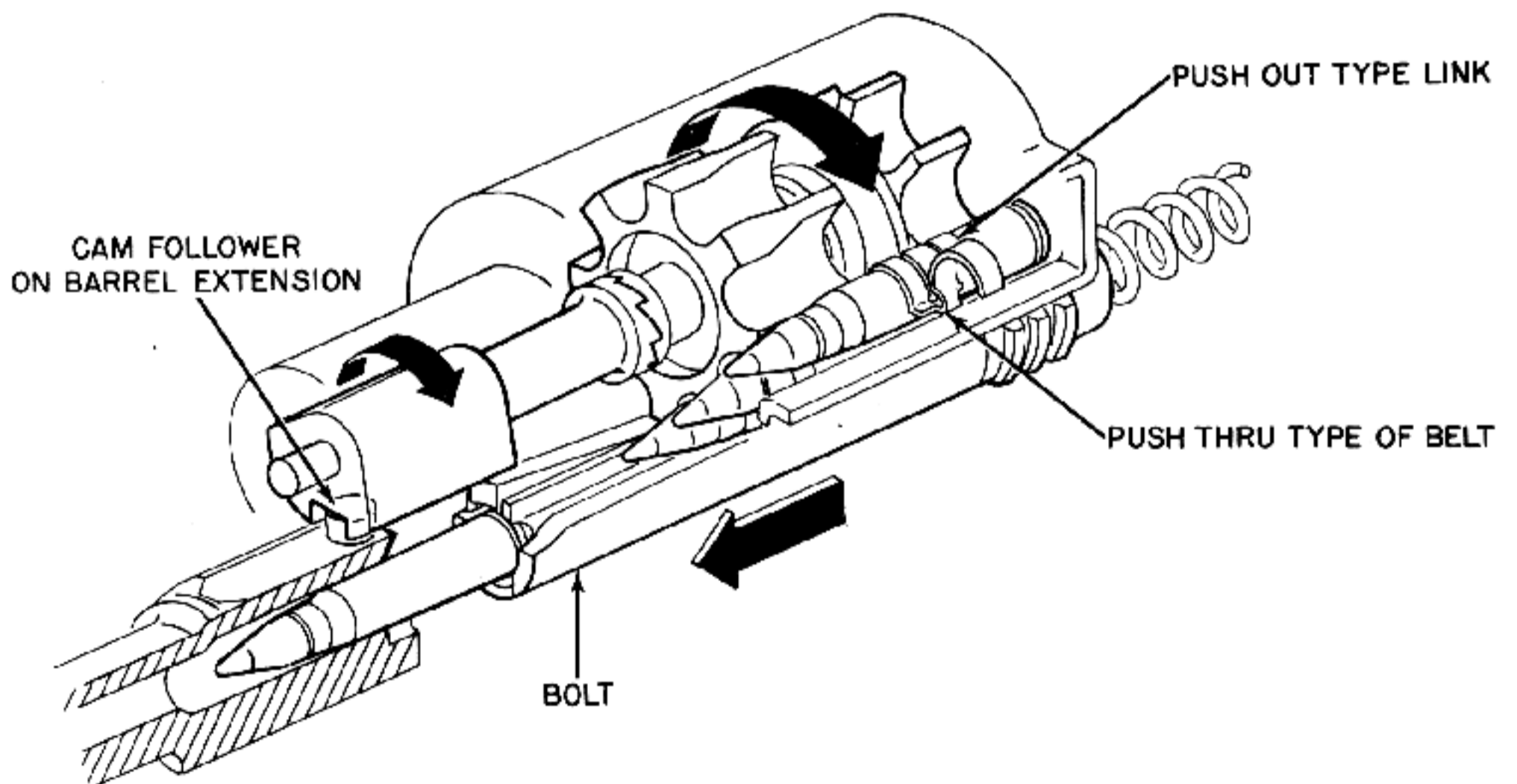


Figure 5-25. Recoiling Barrel Extension Rotates Feed Sprocket.

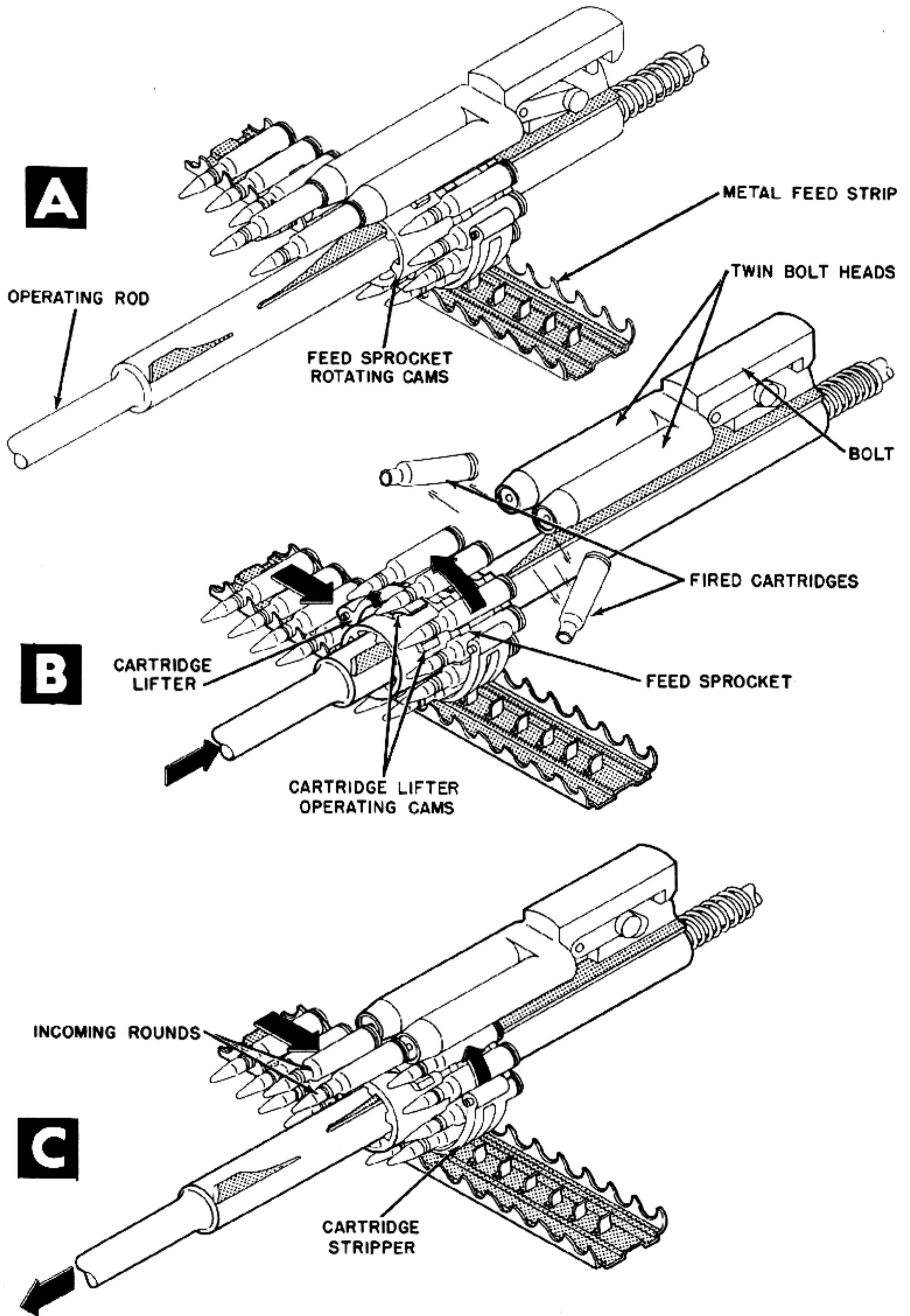
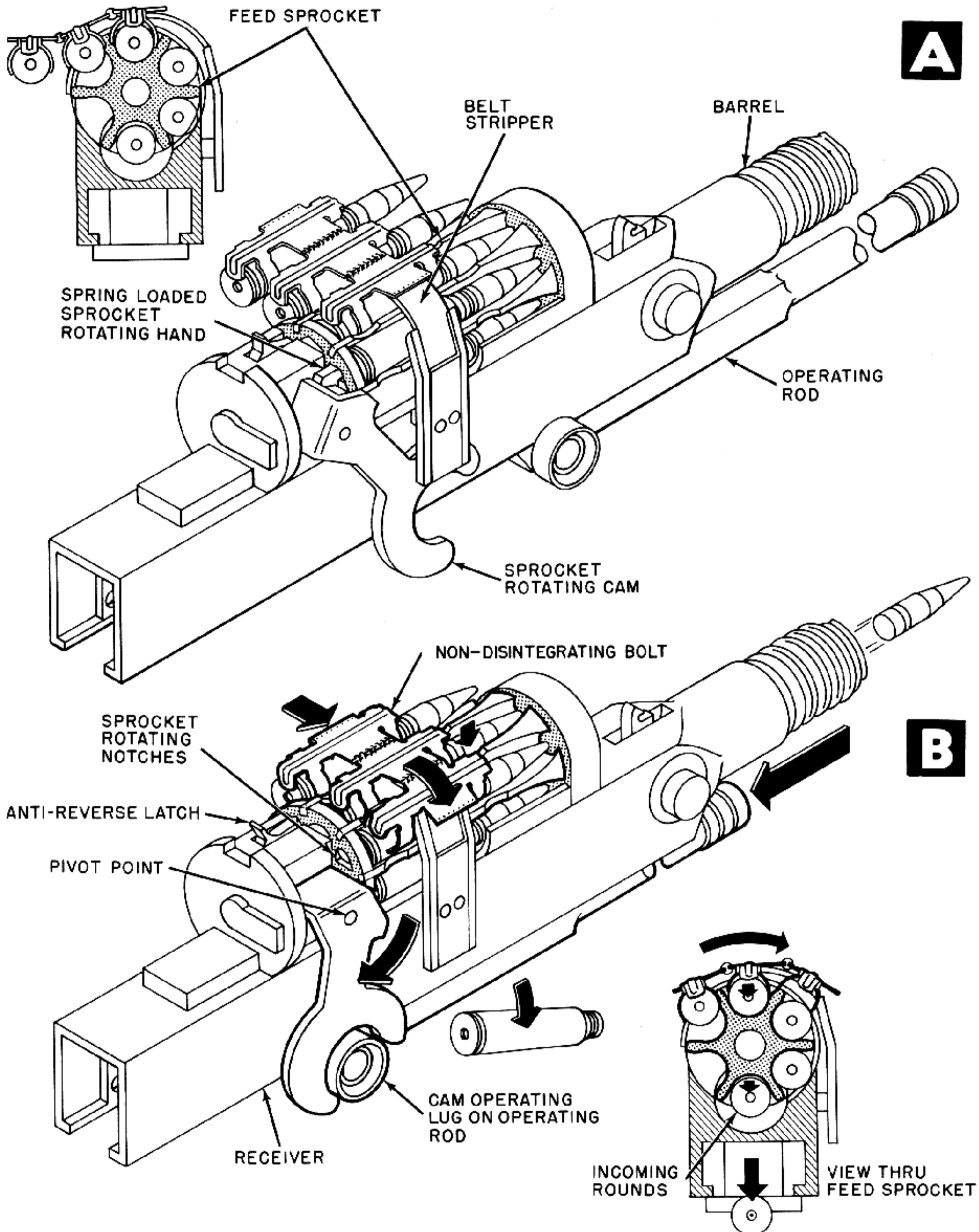


Figure 5-26. Cams on Operating Rod Rotate Feed Sprocket.



**A**



**B**

Figure 5-27. Lug on Operating Rod Actuates Sprocket Rotating Cam.



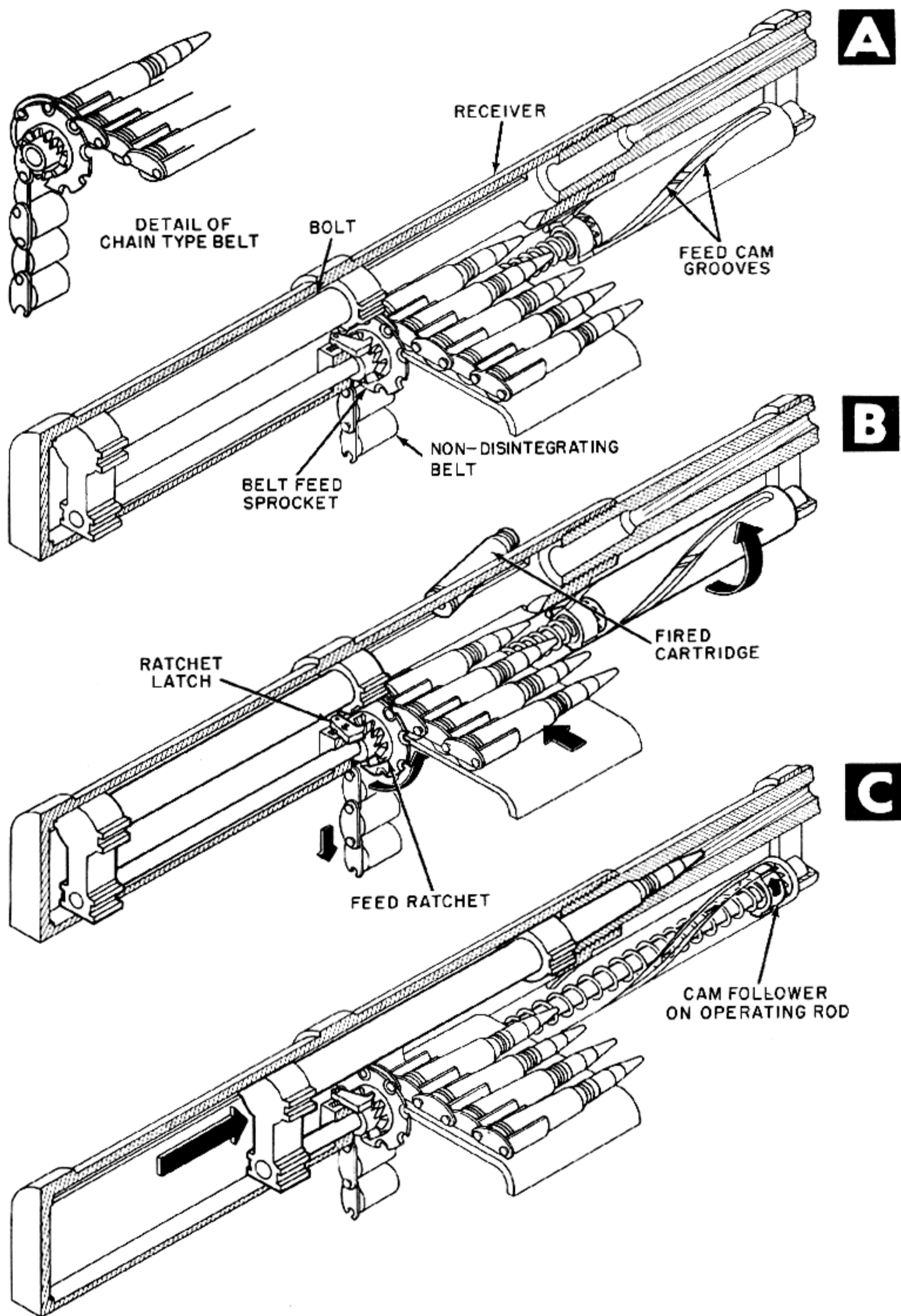


Figure 5-28. Rotating Sprocket Actuates Bicycle Type Chain Ammunition Belt.

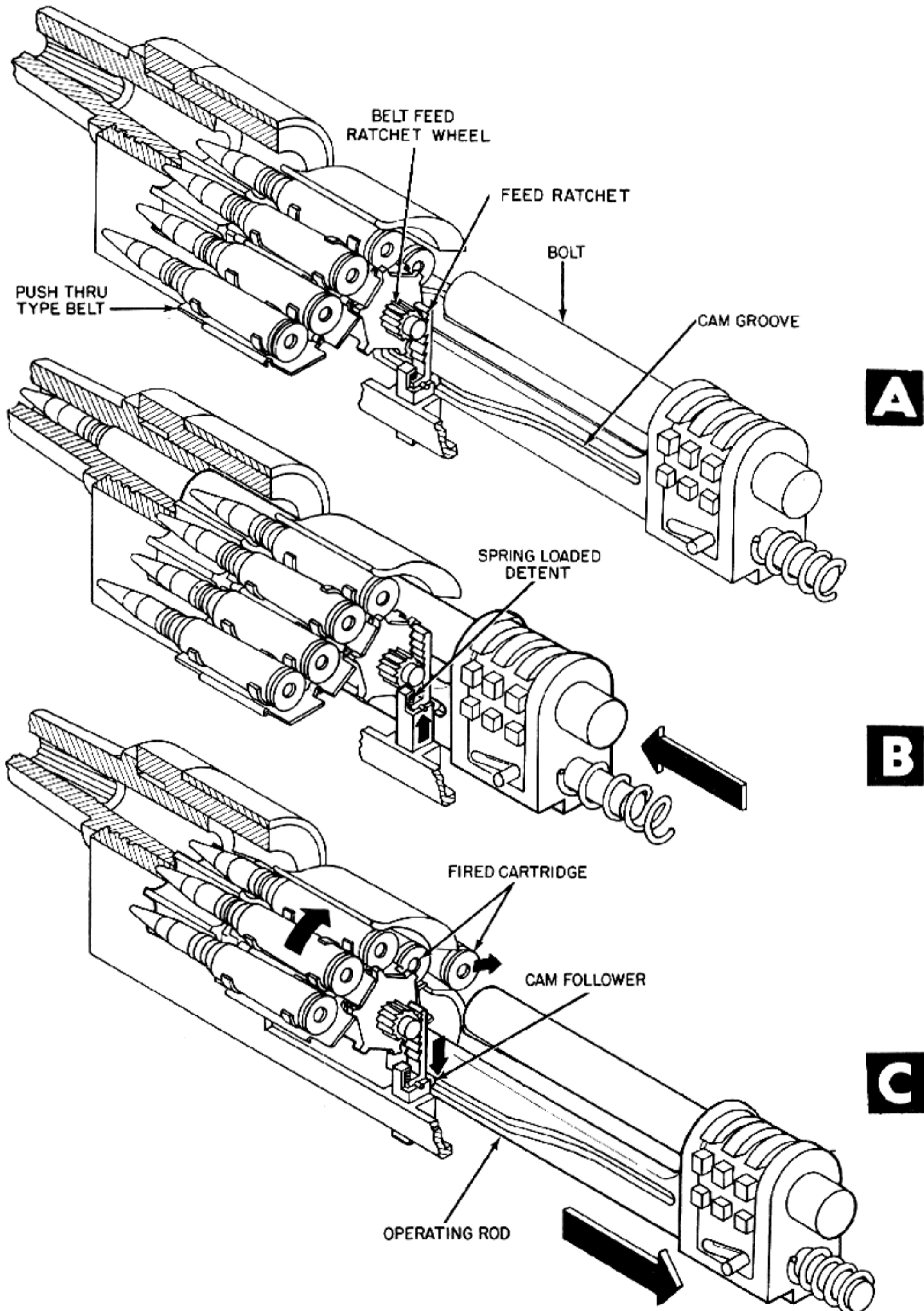


Figure 5-29. Cam Groove in Operating Rod Actuates Feed Sprocket Ratchet.

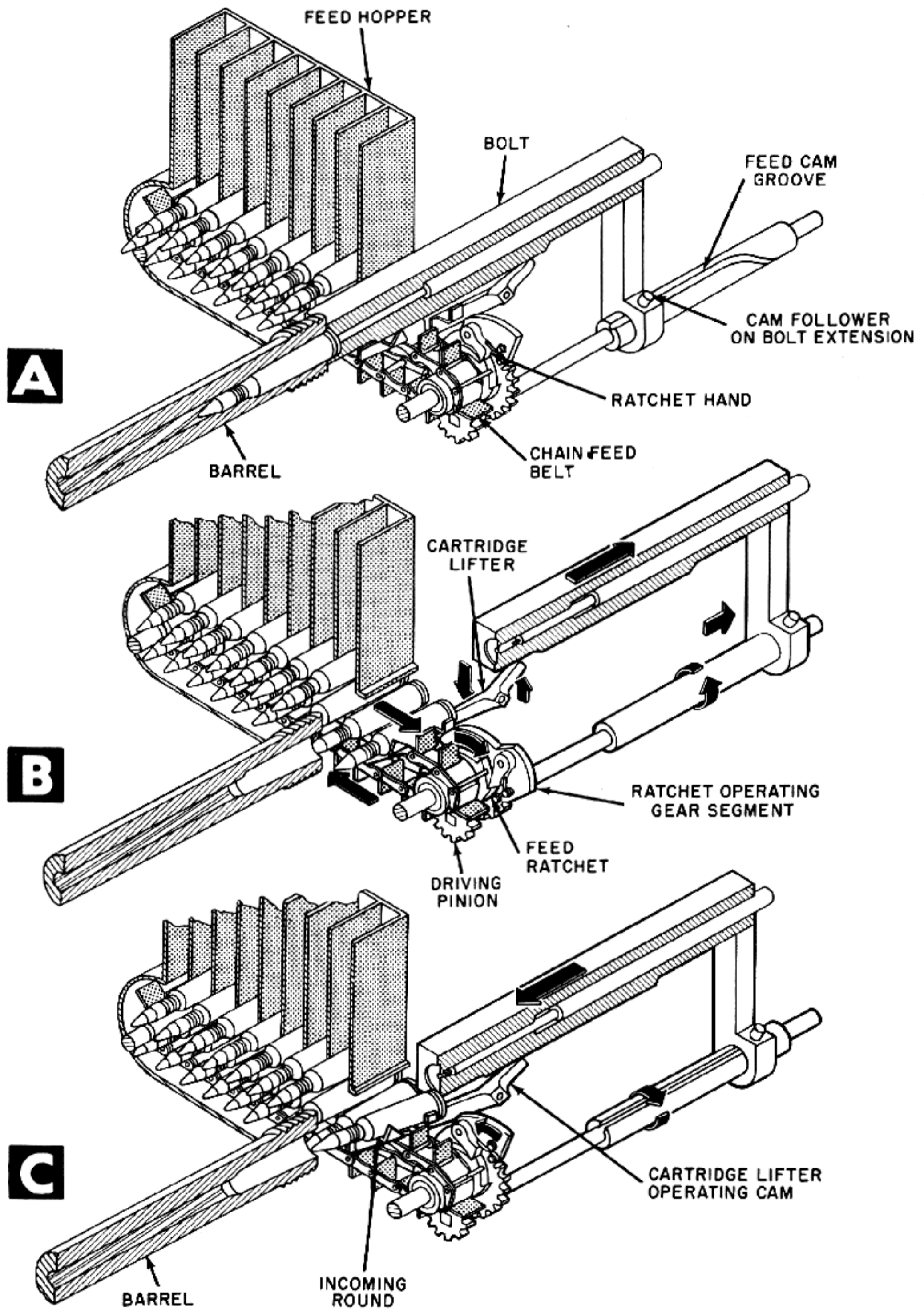


Figure 5-30. Recoiling Bolt Actuates Conveyor Pinions.



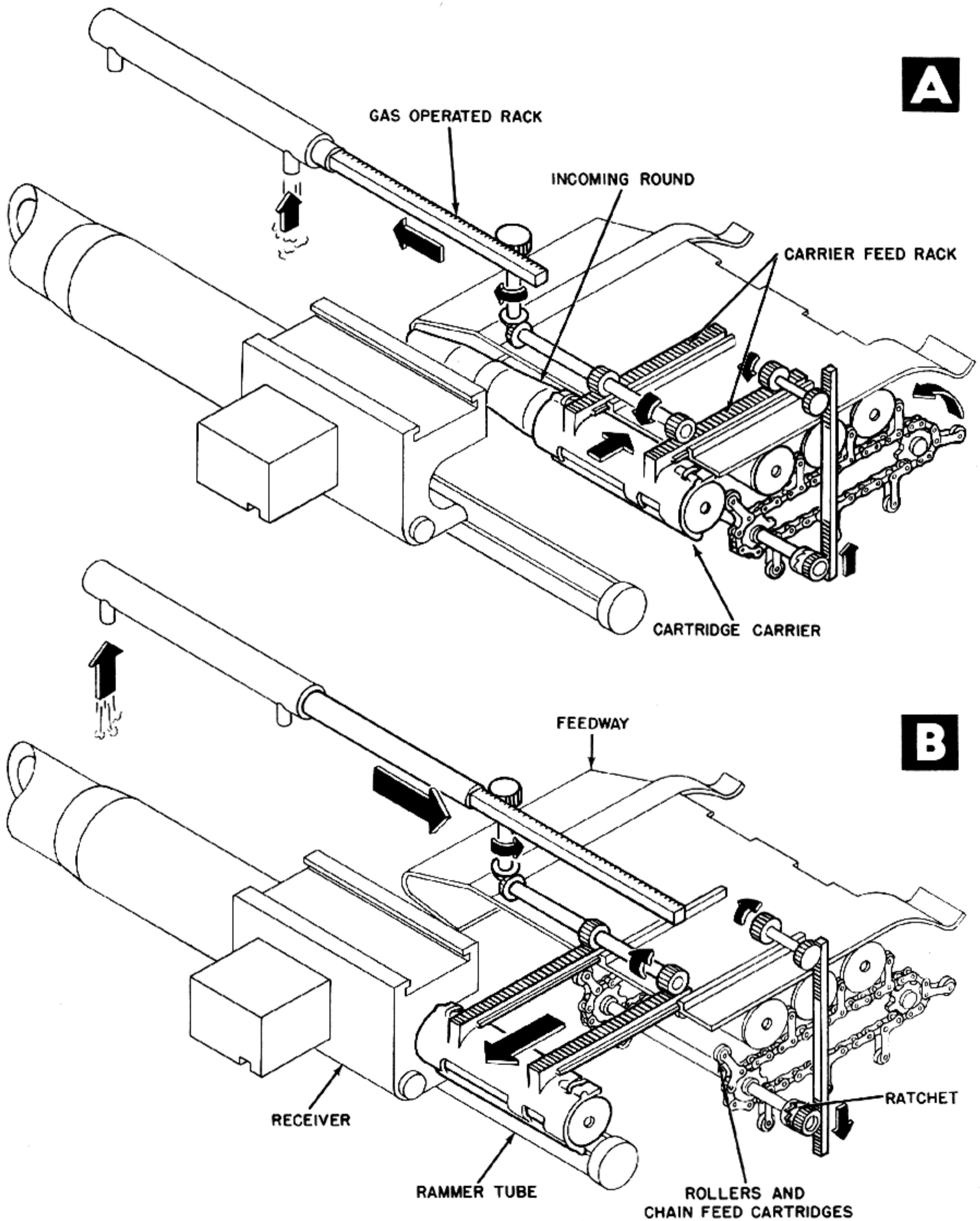


Figure 5-31. Gas Operated Rack and Pinion System Actuates Cartridge Conveyor.



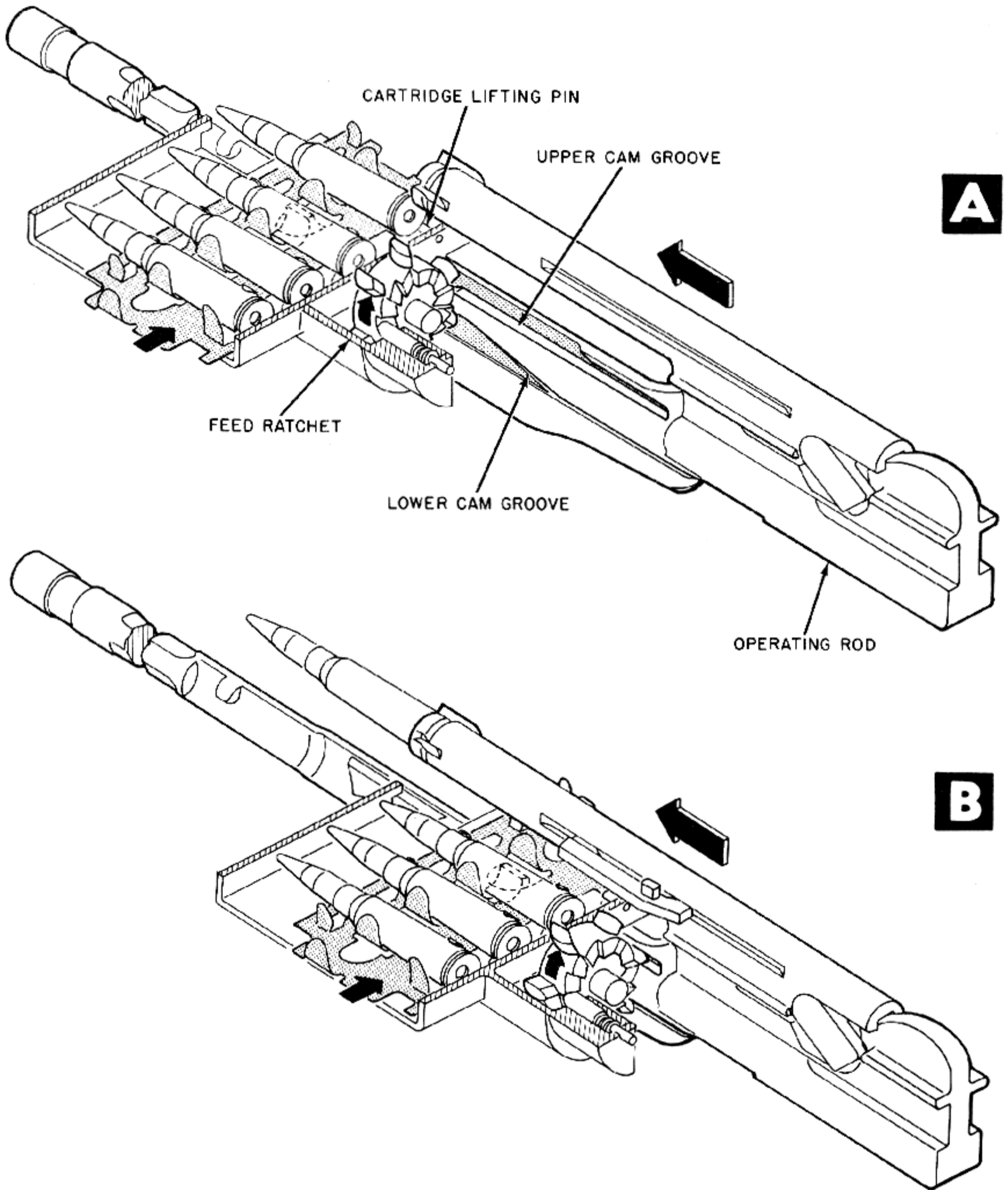
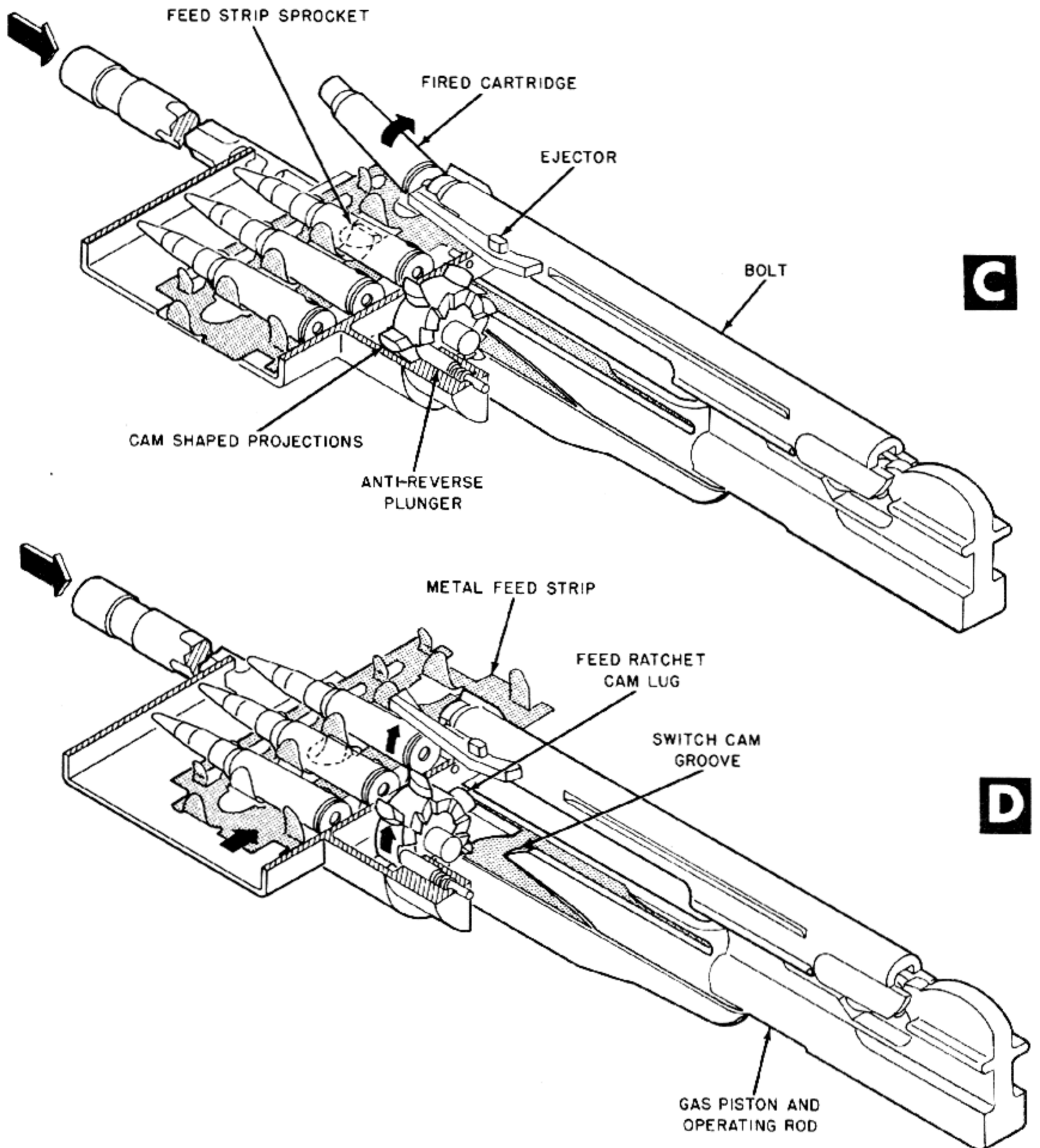


Figure 5-32. Cam Grooves in Operating Rod Actuate



Cam Followers on Feed Sprocket Surface.

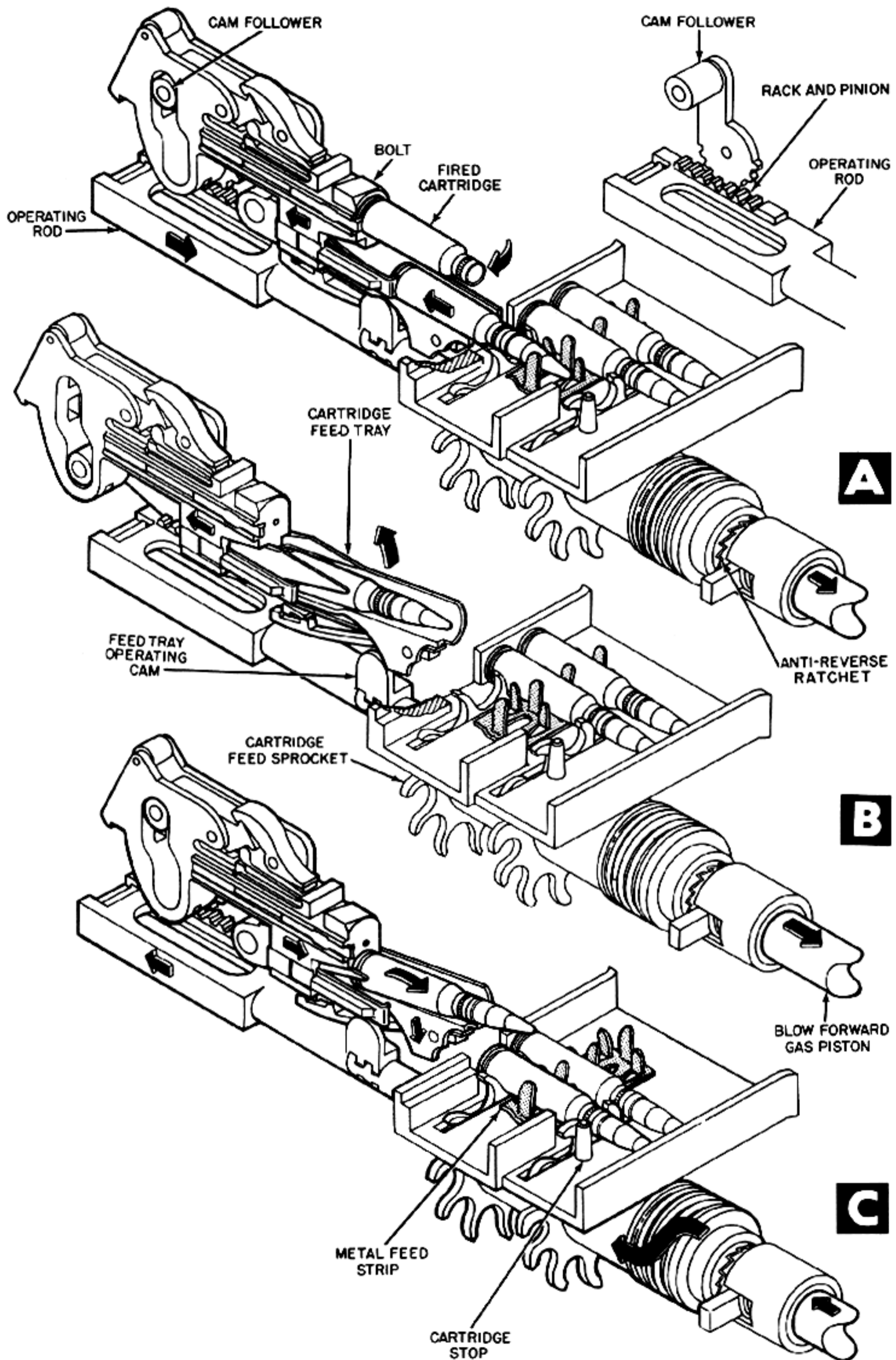


Figure 5-33. Blow-forward Operating Rod Lifts Cartridge Feed Tray and Rotates Sprocket.

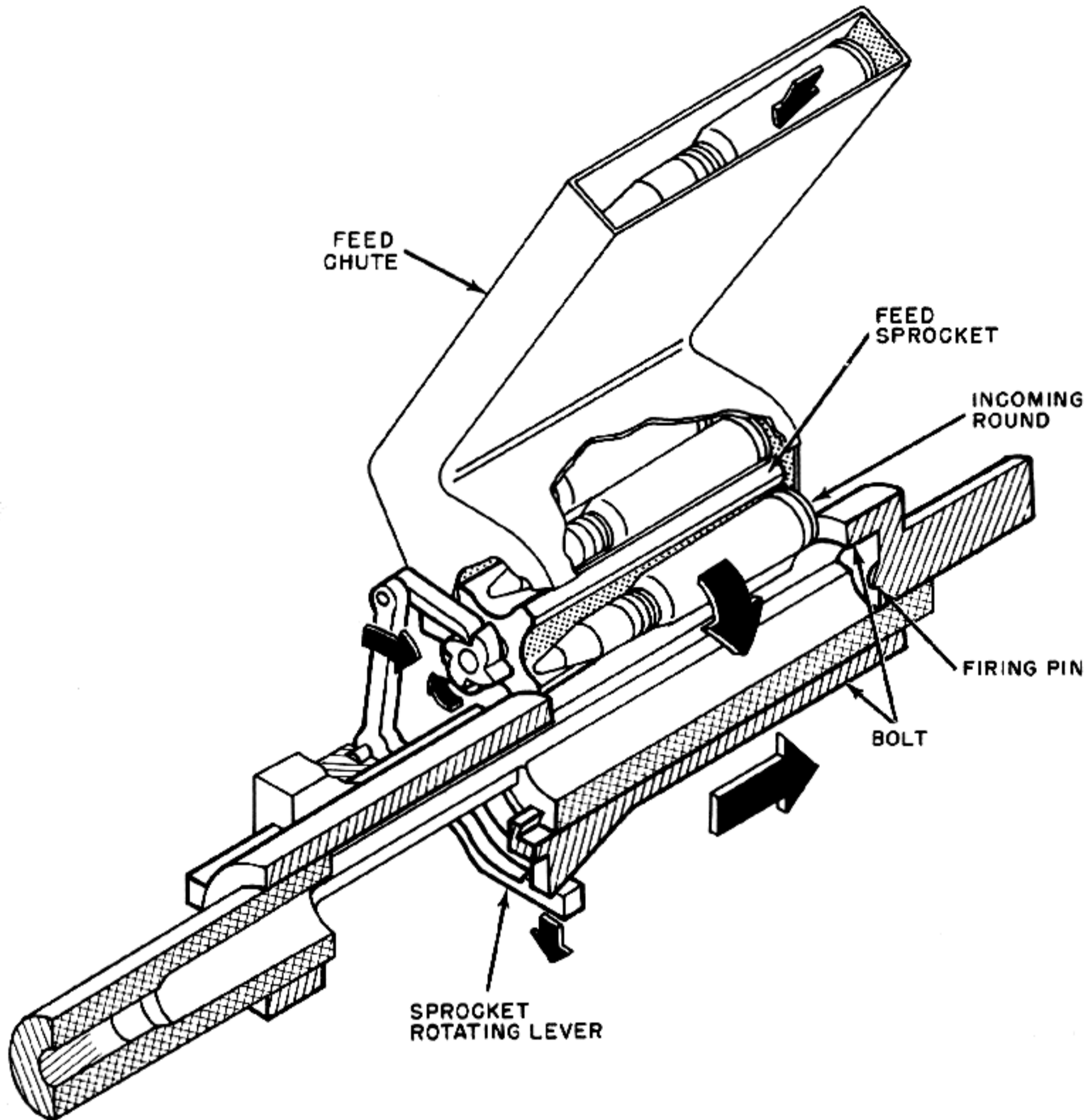


Figure 5-34. Recoiling Bolt Actuates Feed Sprocket.



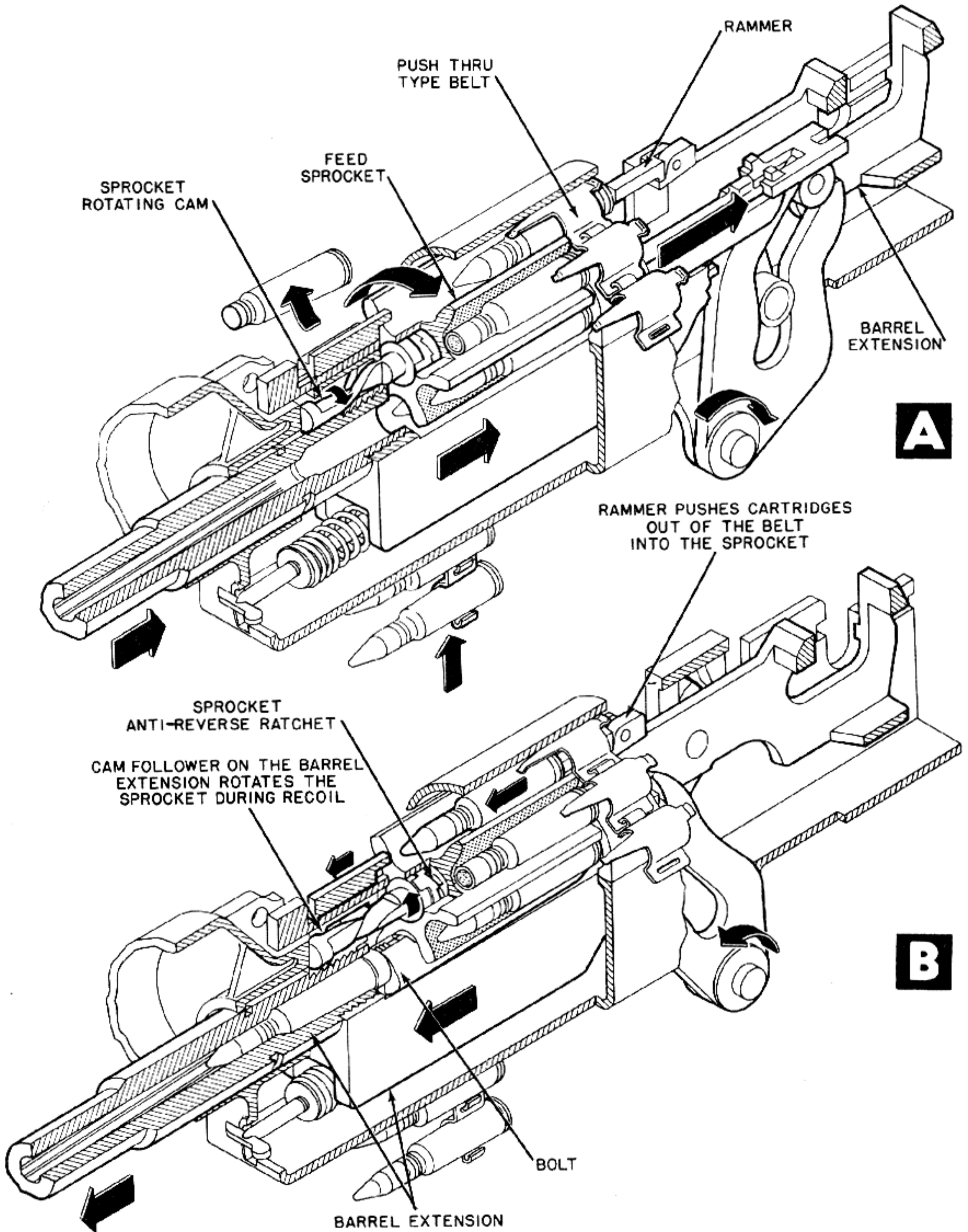


Figure 5-35. Cam Follower on Barrel Extension Rotates Feed Sprocket.

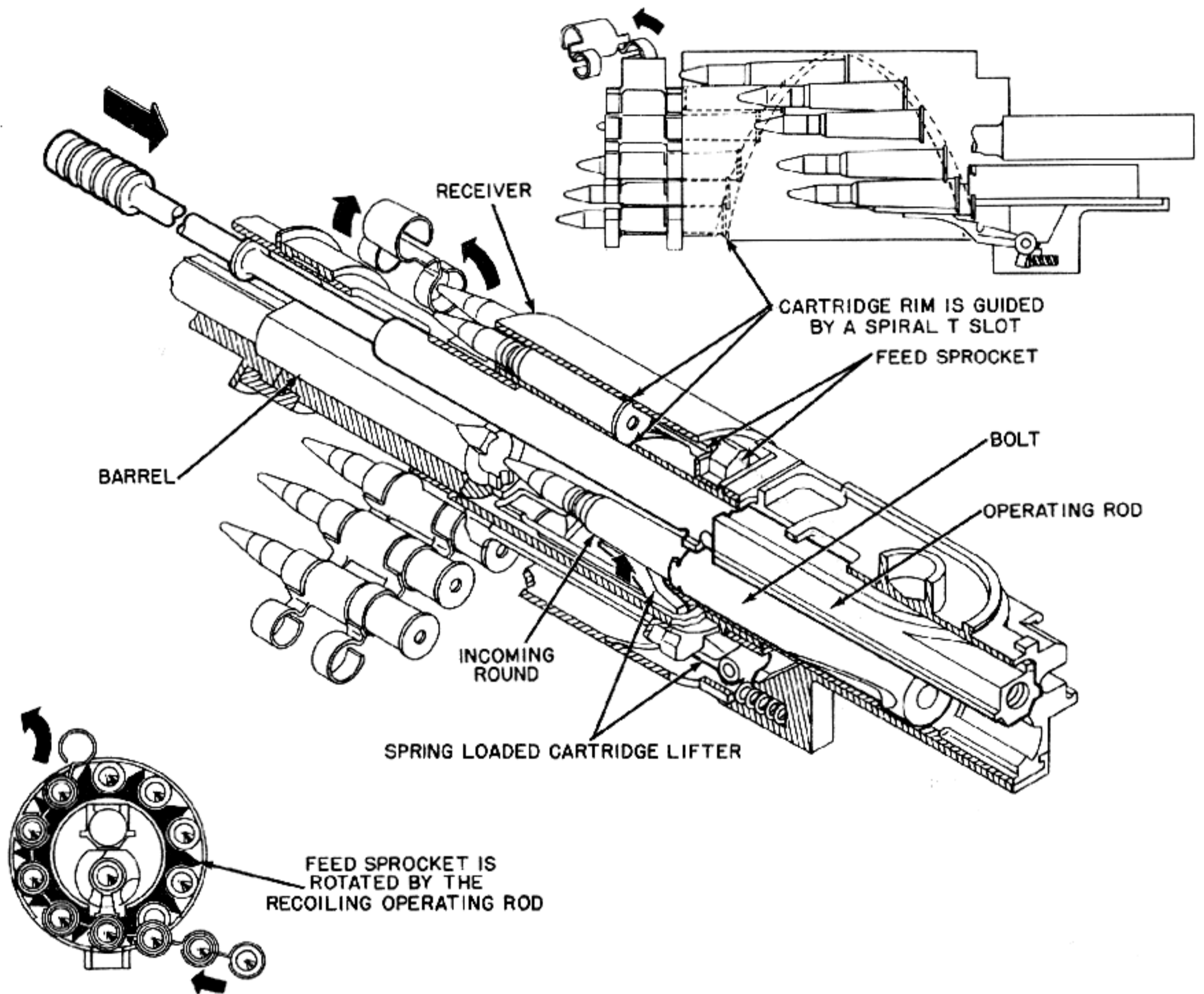


Figure 5-36. Spiral Cam Withdraws Rimmed Ammunition From Belt.

D. Cartridge Lifter

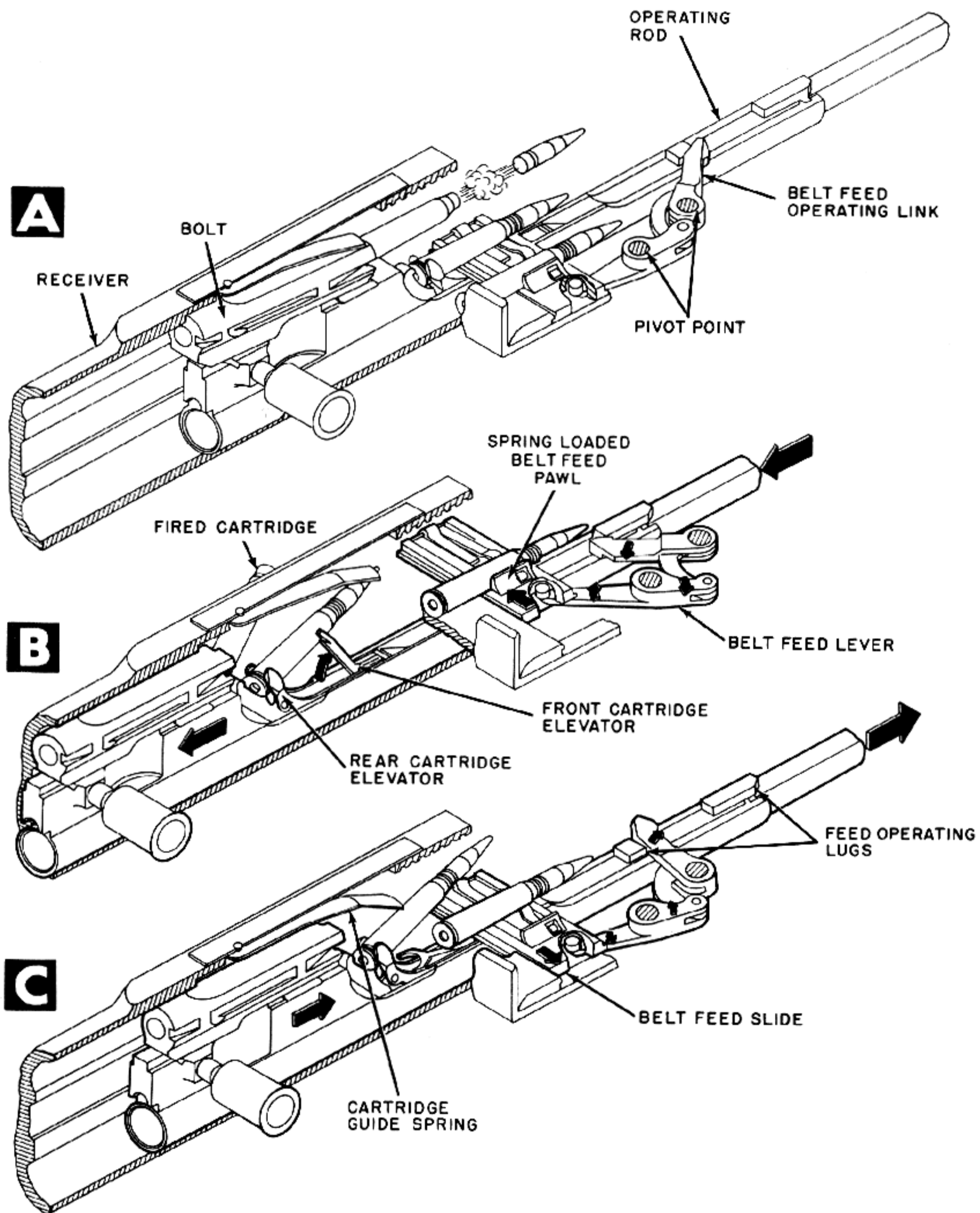


Figure 5-37. Cam on Operating Rod Actuates Belt Feed Levers and Cartridge Elevators.



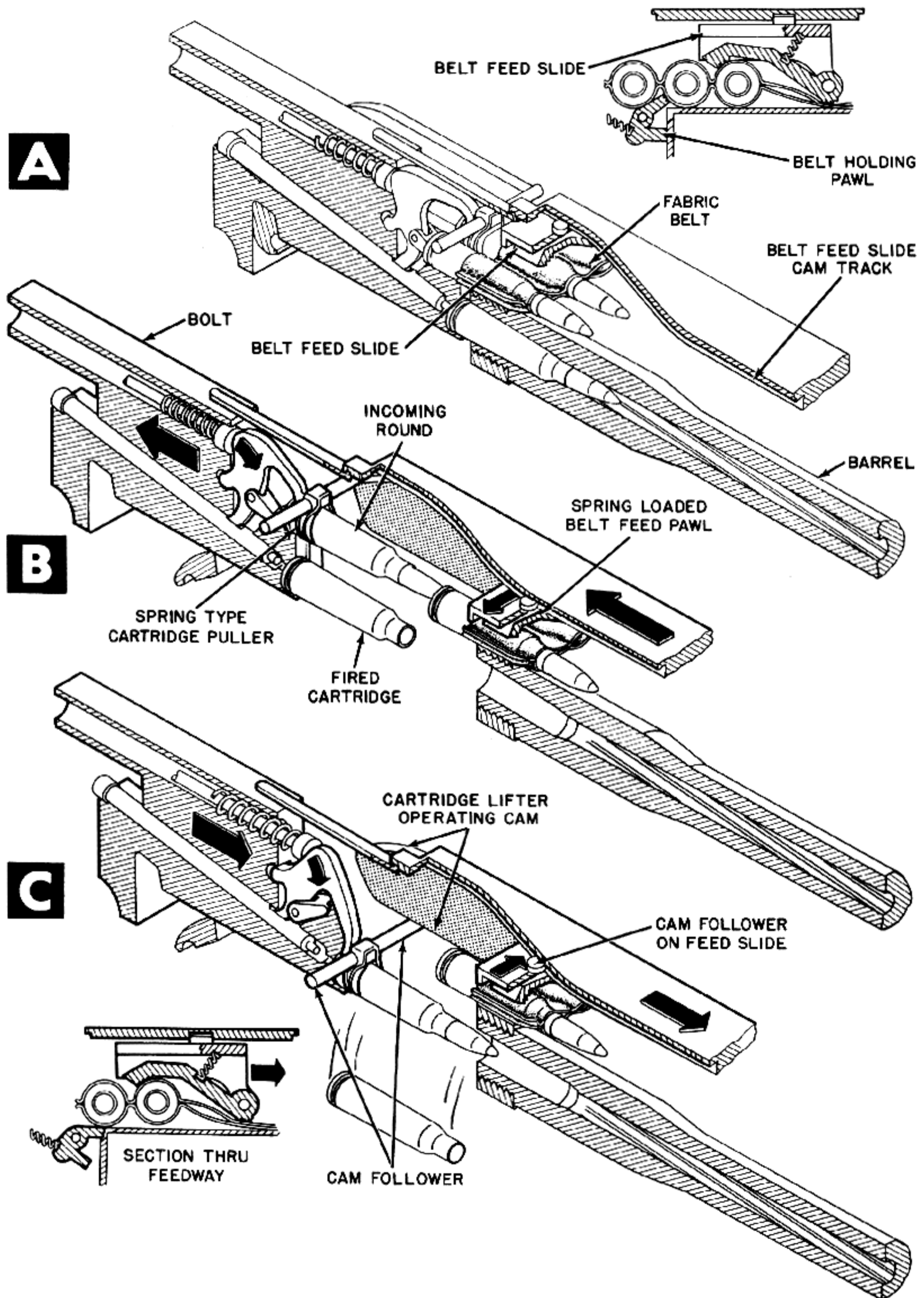


Figure 5-38. Recoiling Cam Plate Actuates Belt Feed Lever and Cartridge Elevator.



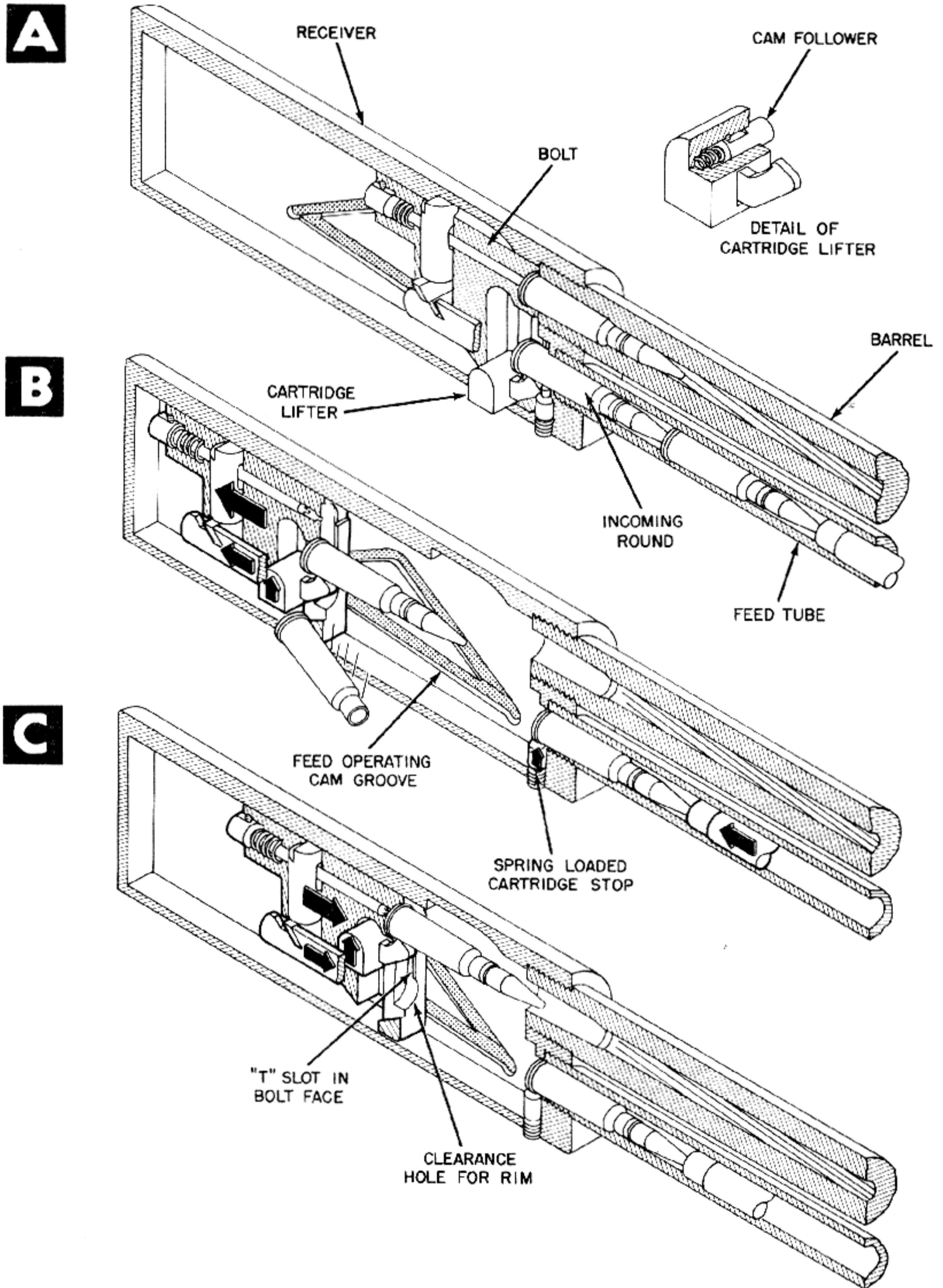


Figure 5-39. Cartridge Lifter Is Actuated by Cams in Receiver Wall.

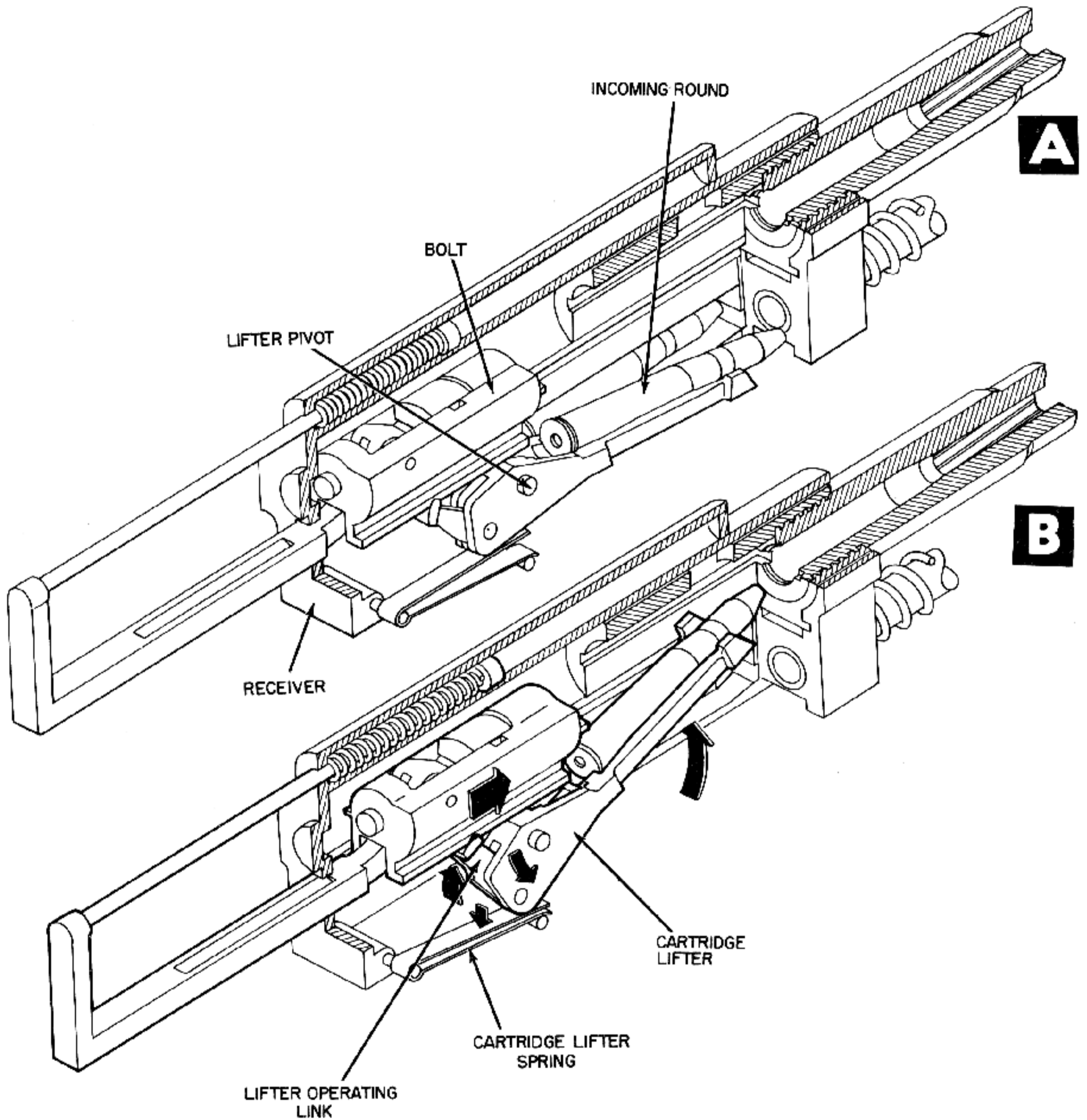


Figure 5-40. Counter-Recoiling Bolt Actuates Cartridge Lifter.

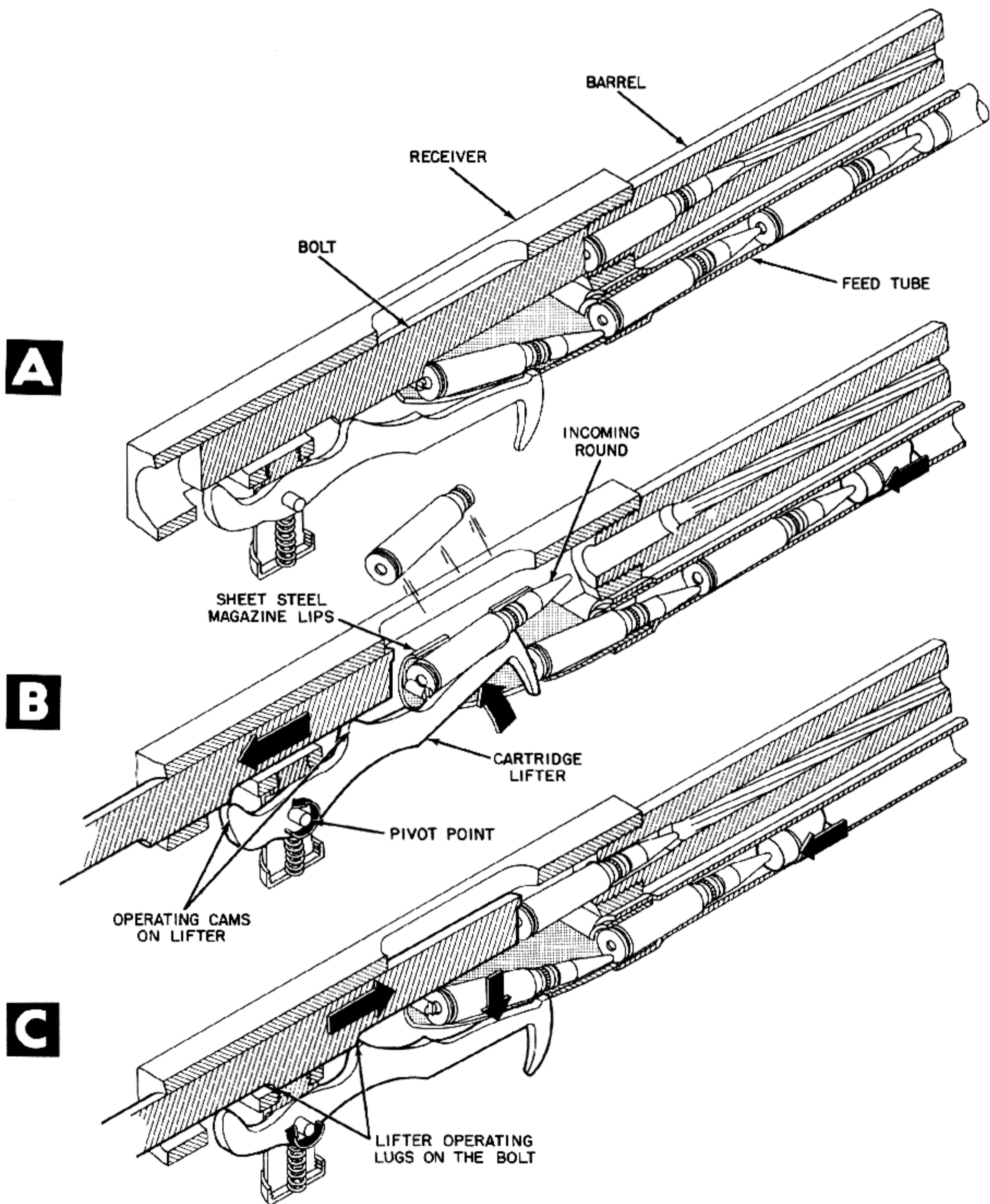


Figure 5-41. Recoiling Bolt Actuates Cartridge Lifter.



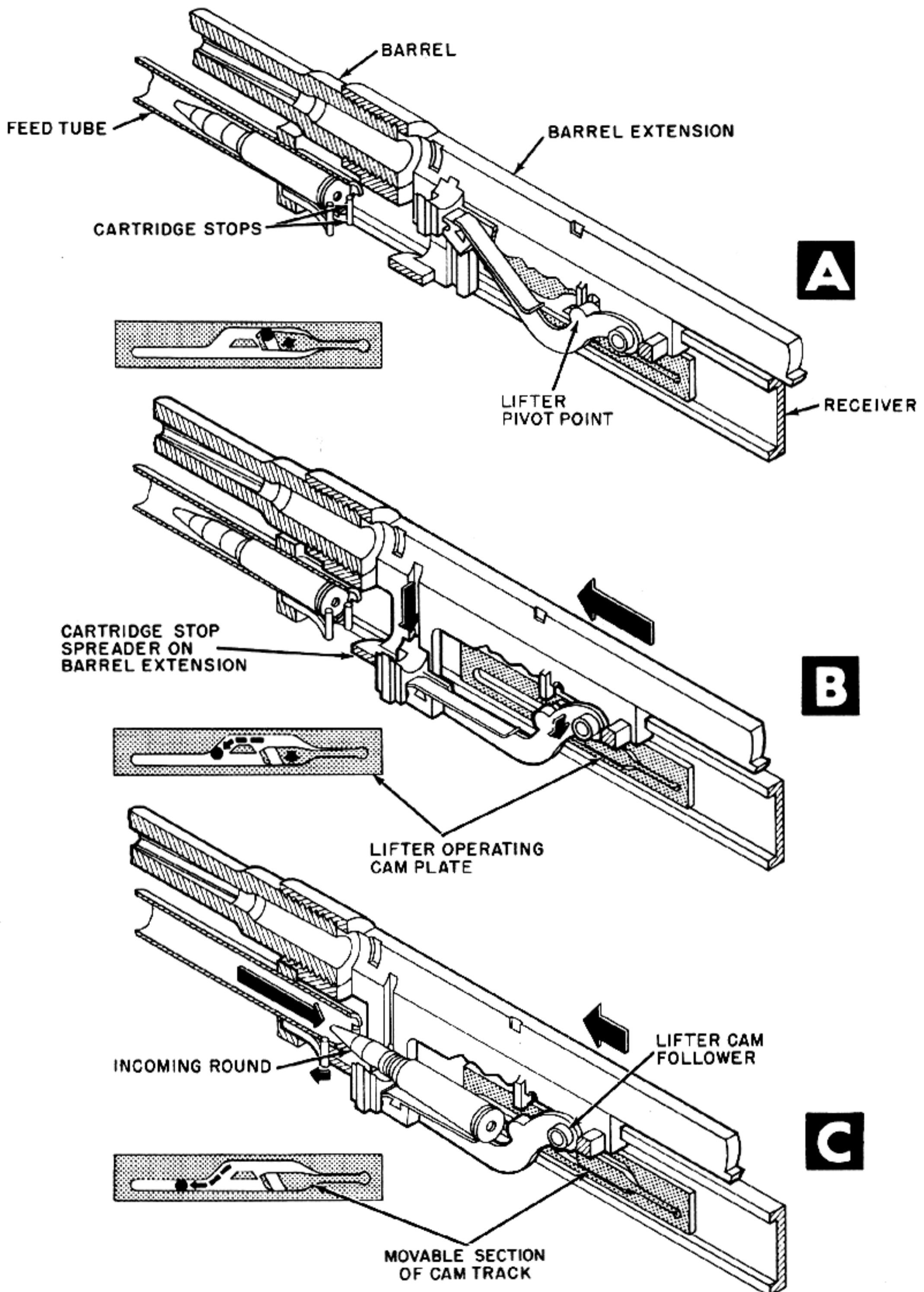


Figure 5-42. Cam Track on Receiver Actuates Cartridge Lifter.



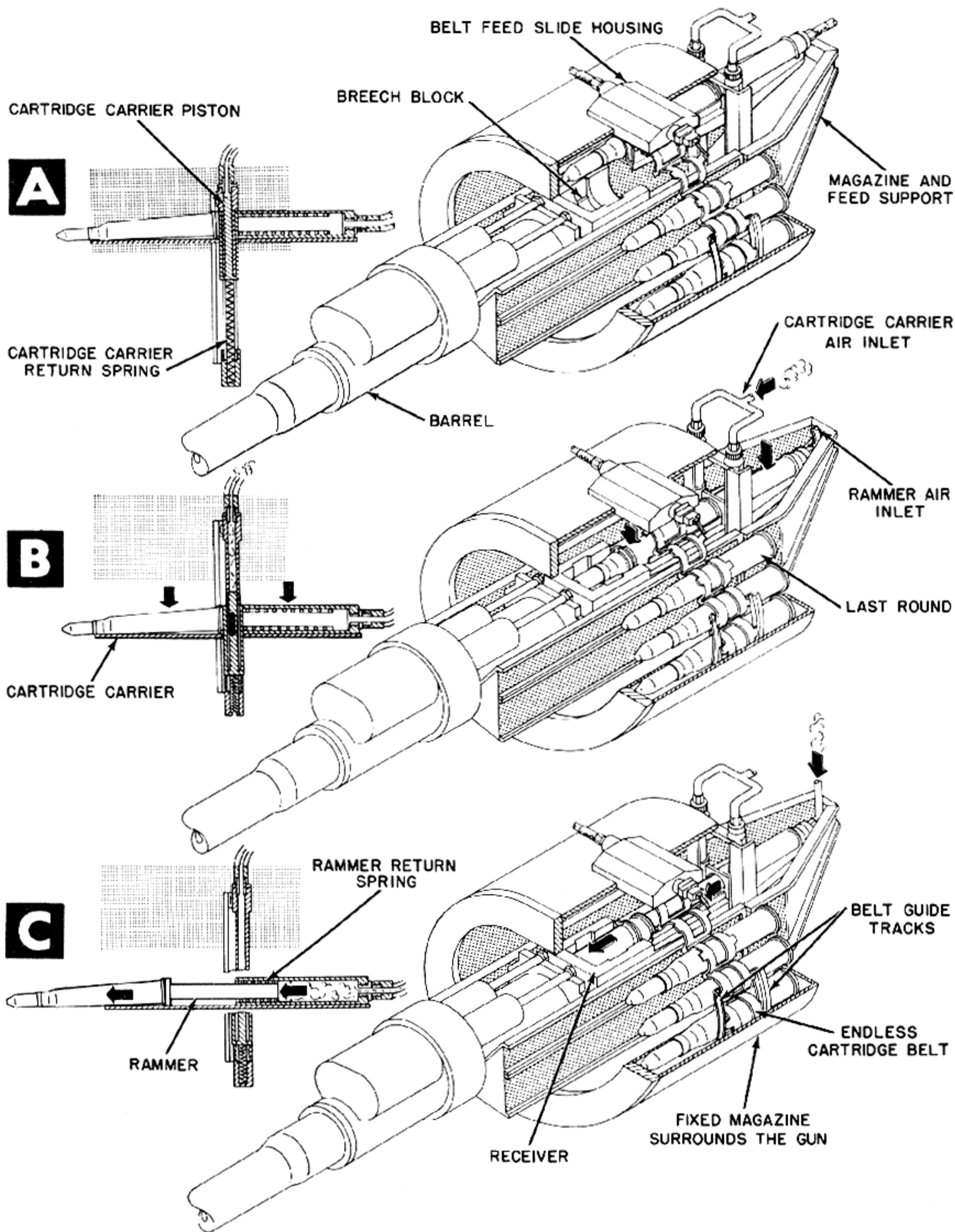


Figure 5-43. Gas Actuated Cartridge Lifter and Rammer.

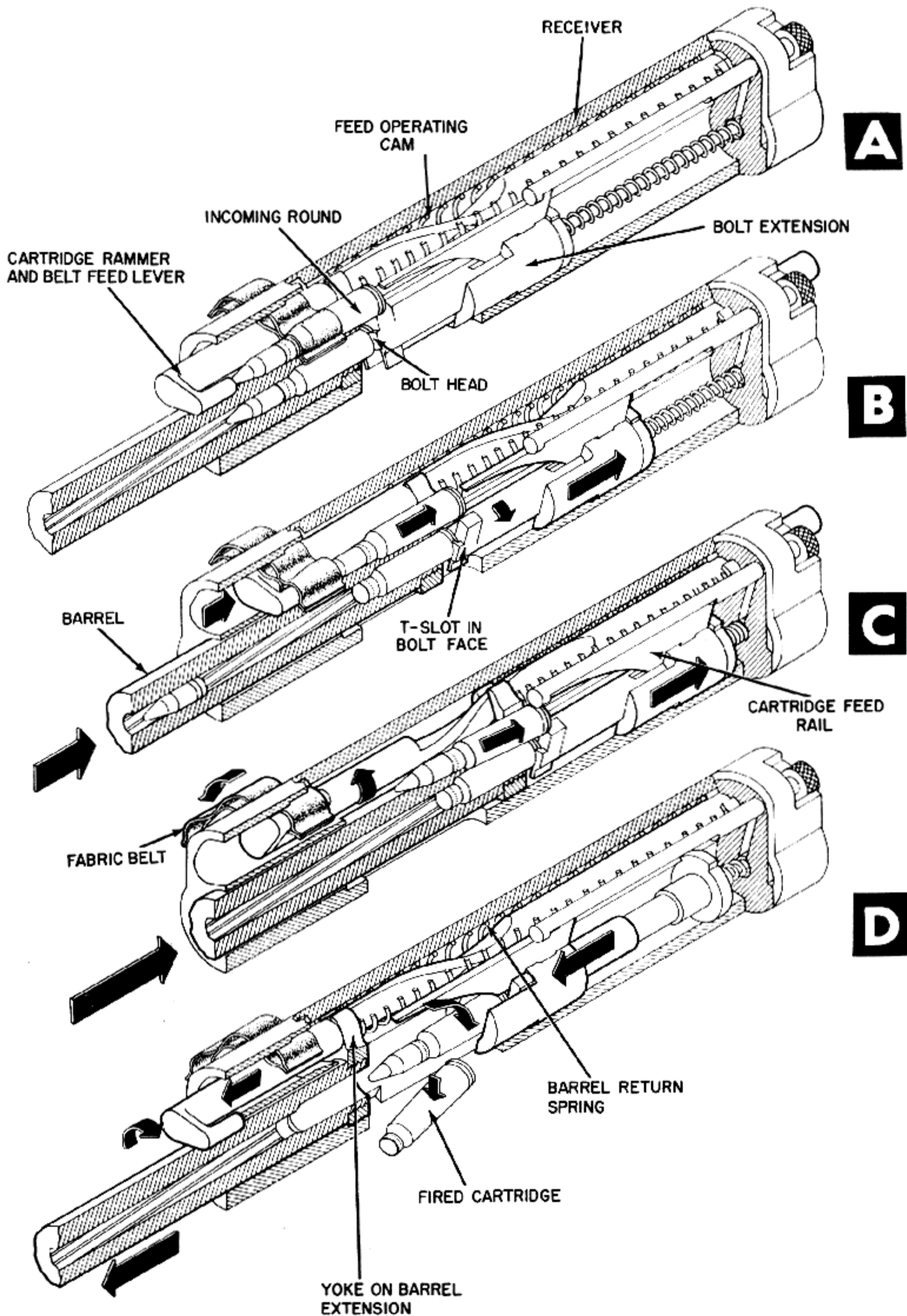


Figure 5-44. Cam on Barrel Extension Actuates Belt Feed Lever.

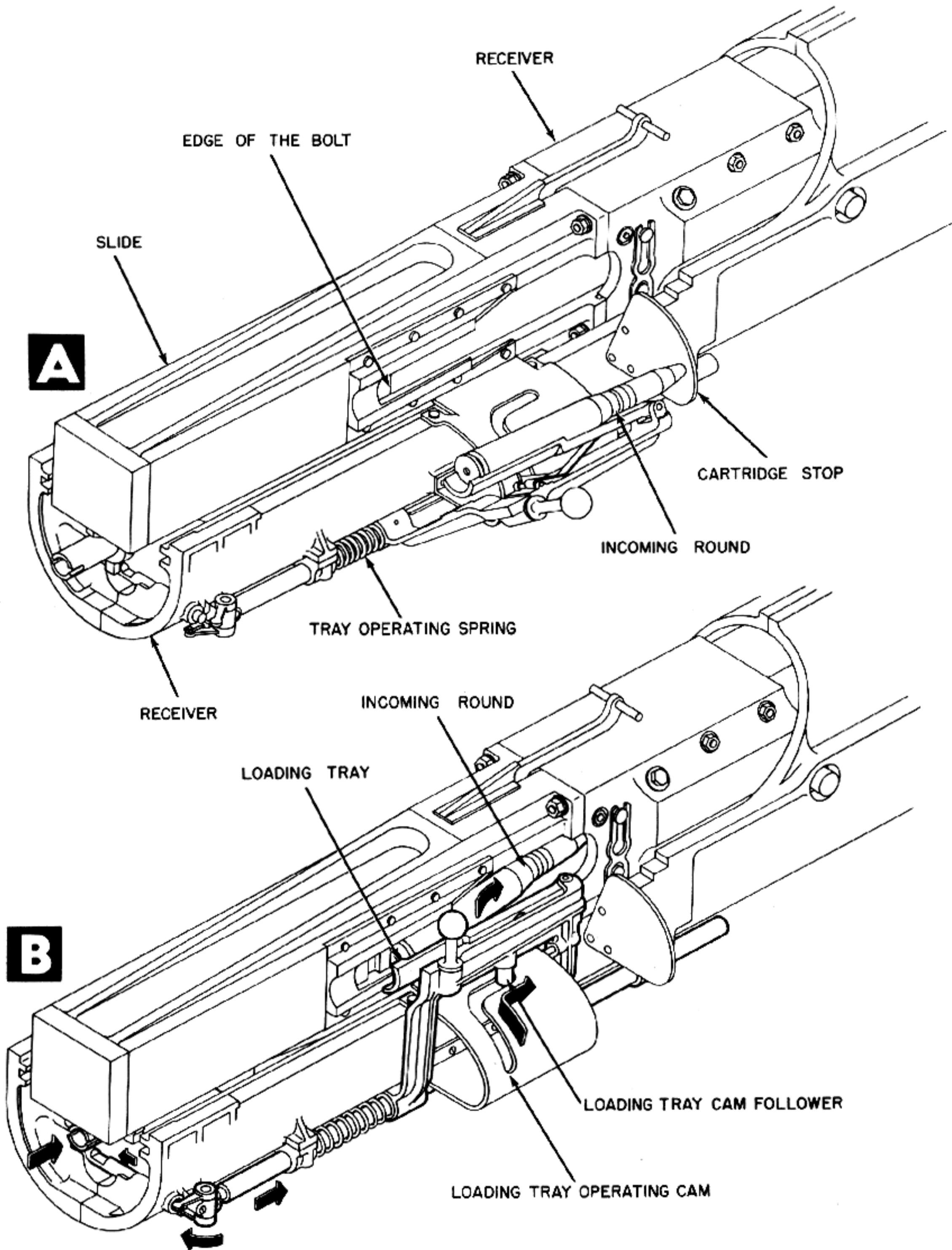


Figure 5-45. Cam on Receiver Guides Spring-Powered Loading Tray.



E. Rammer

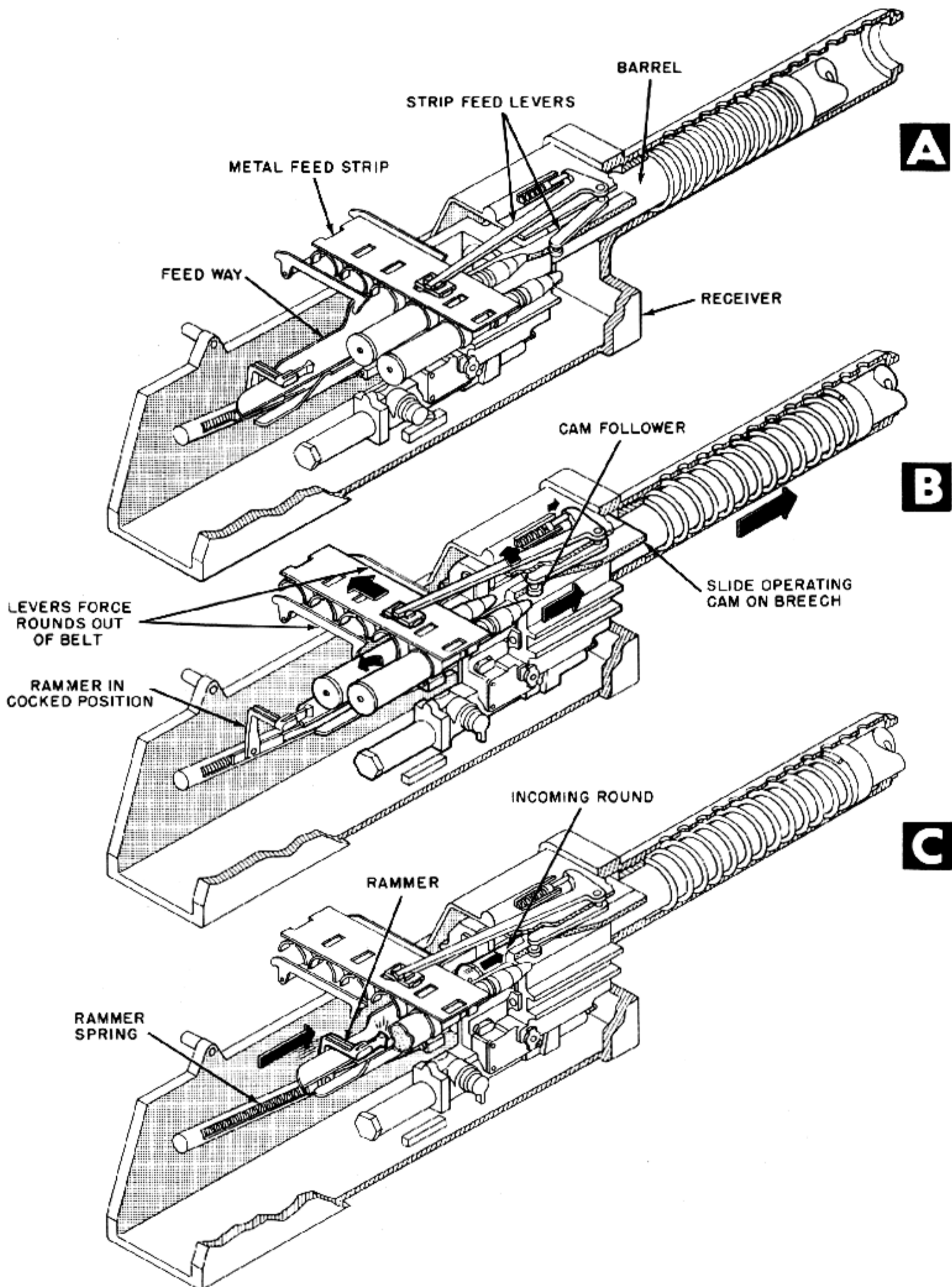


Figure 5-46. Cam on Recoiling Breech Actuates Feed Strip.



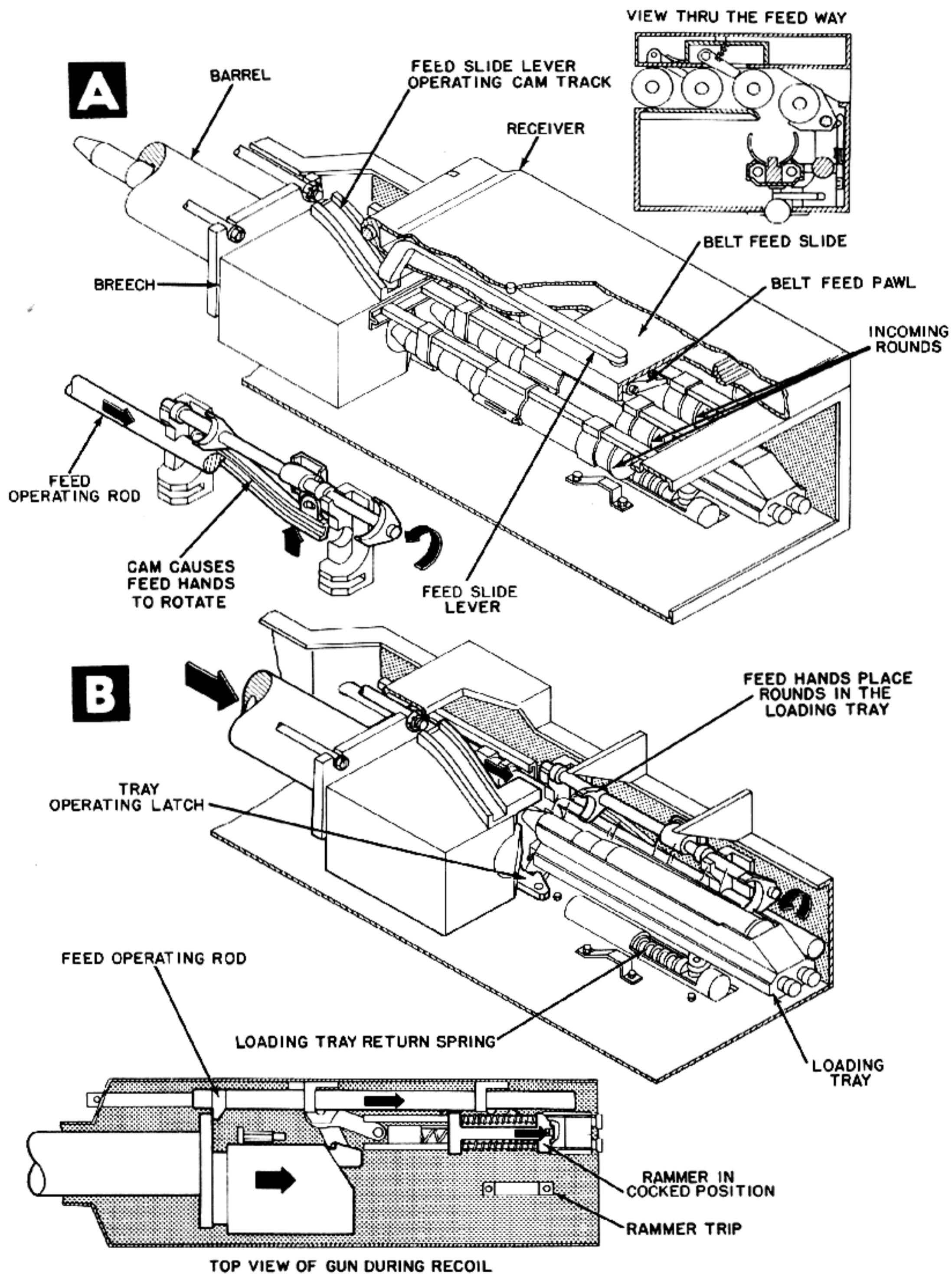
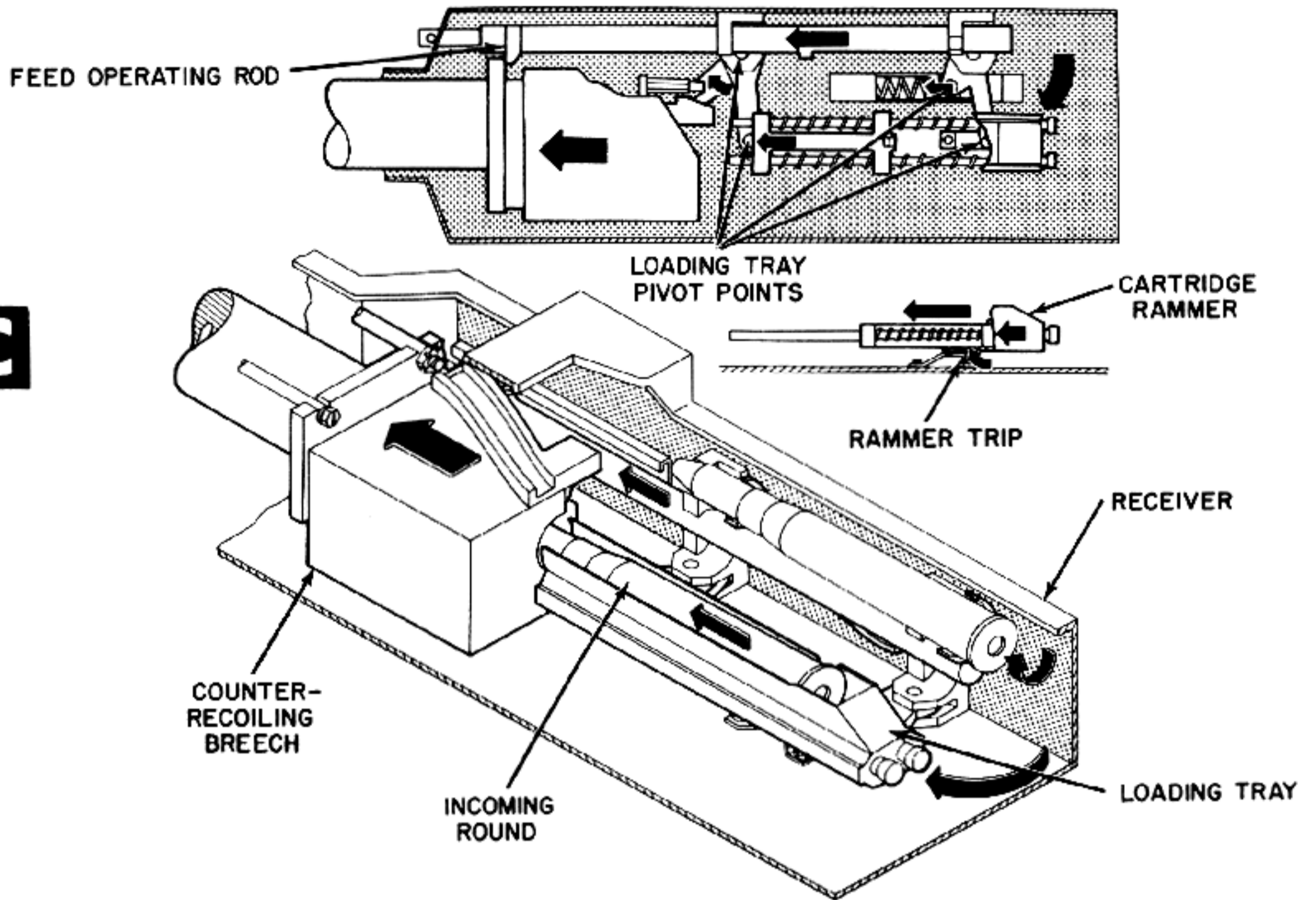
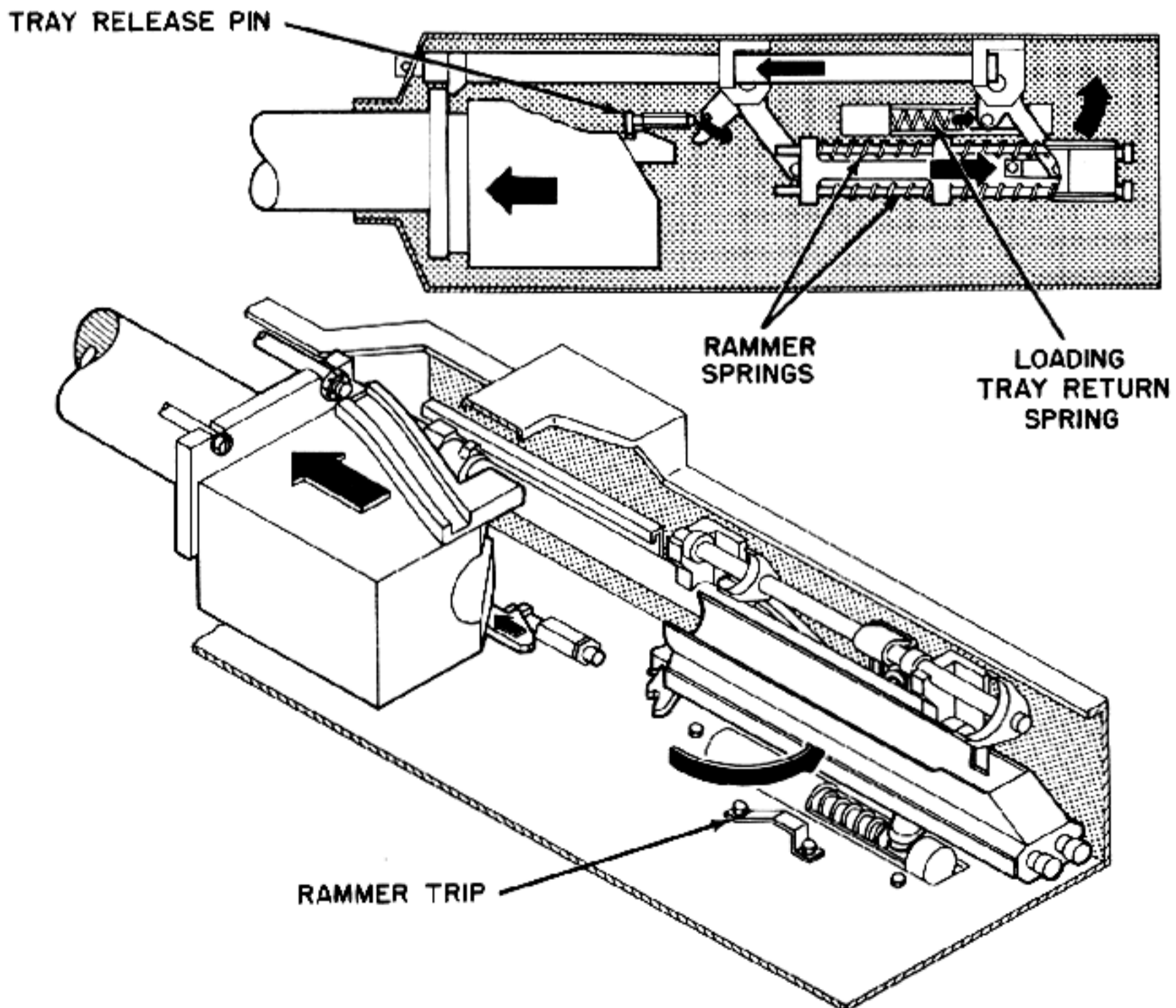


Figure 5-47. Recoiling Breech Block Actuates

**C**



**D**



Belt Feed Slide and Cocks Rammer.

F. Linkless

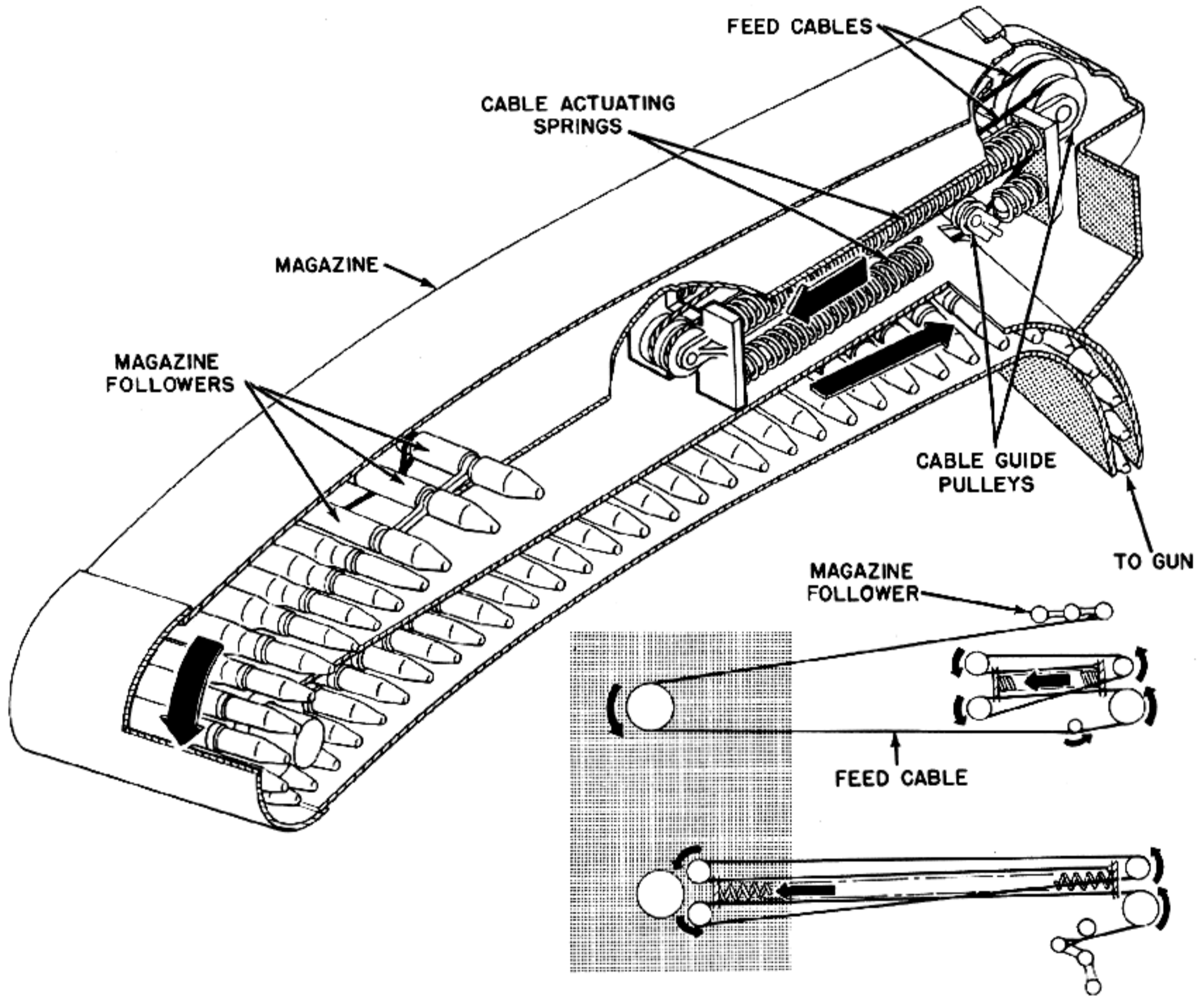


Figure 5-48. Spring-Loaded Cable Makes U-Shaped Magazine Possible.

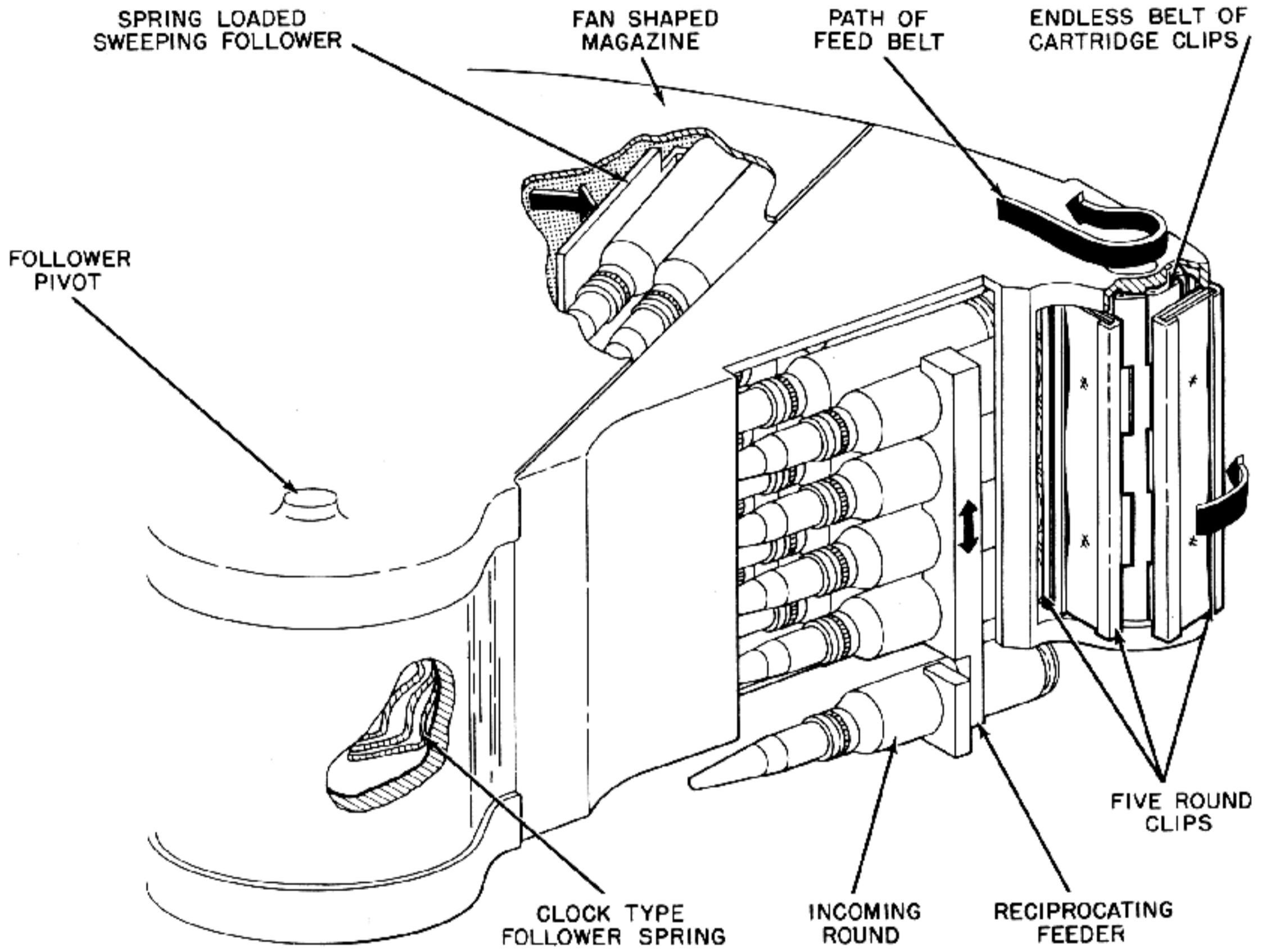


Figure 5-49. Fan-Shaped Magazine Stores Ammunition on Endless Belt of Clips.



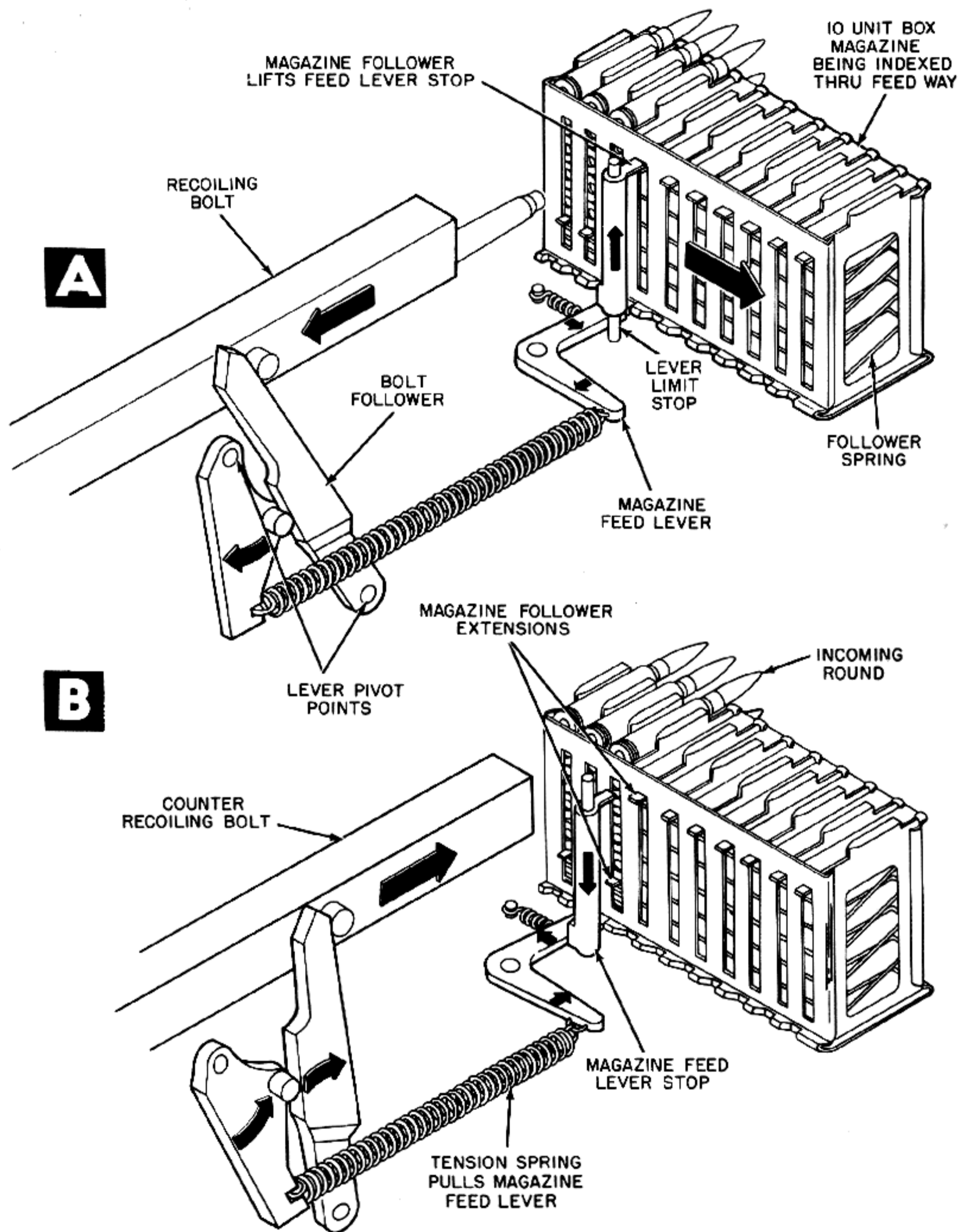


Figure 5-50. Recoiling Bolt Indexes Box Magazine as Each Unit Empties.

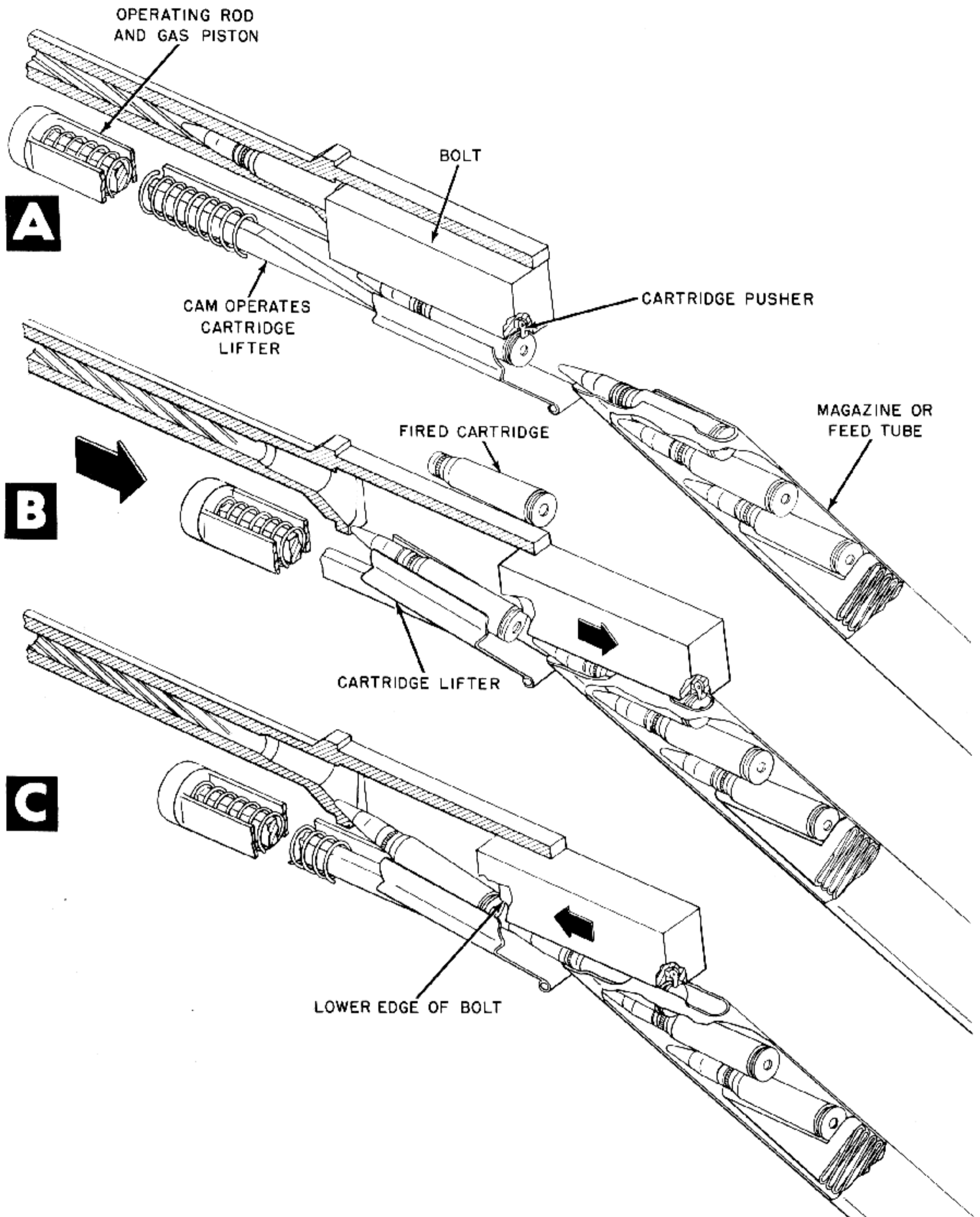


Figure 5-51. Cam on Operating Rod Actuates Cartridge Lifter.

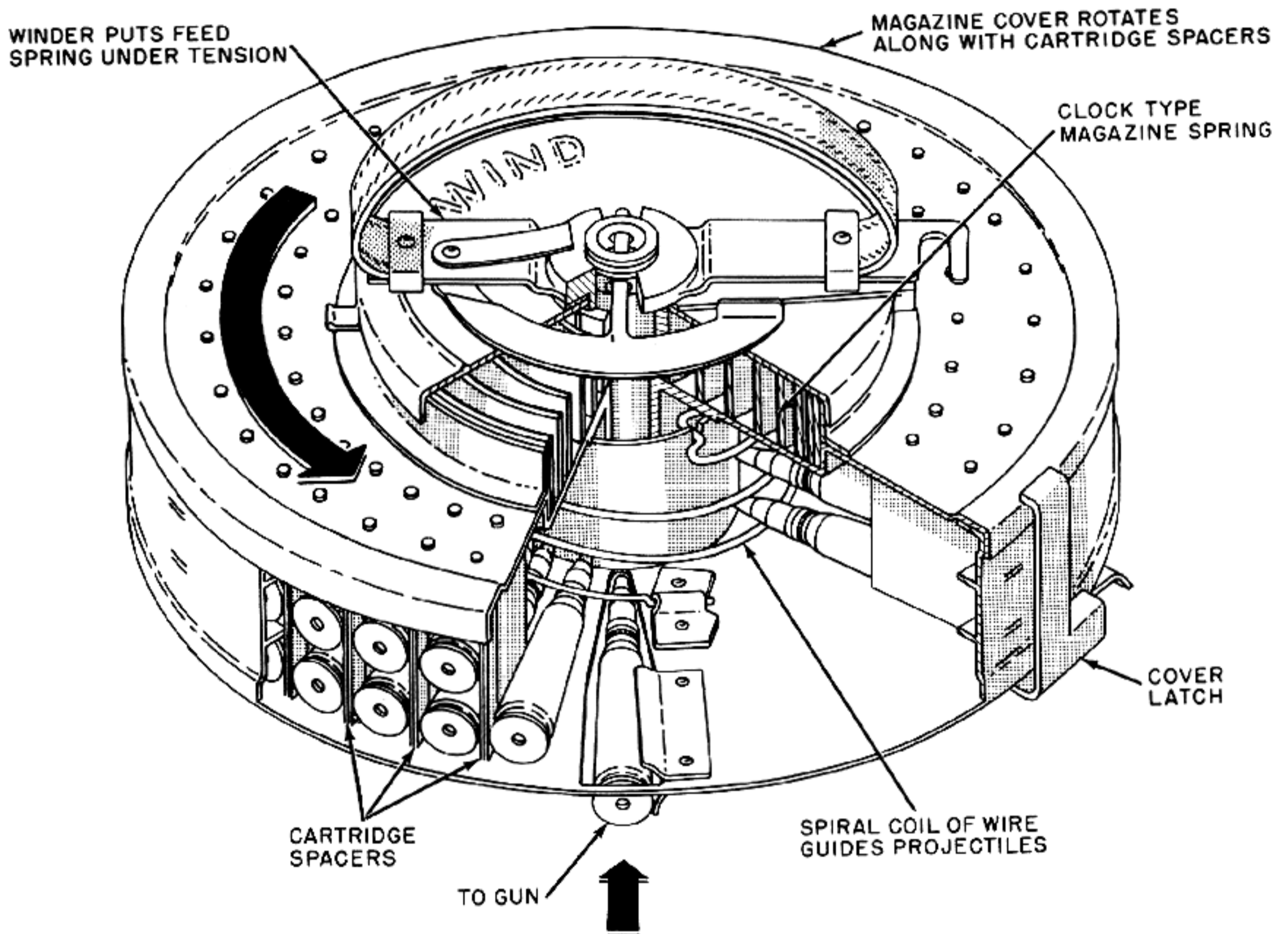


Figure 5-52. Spring-Loaded Magazine Positions Cartridges in Front of Bolt.

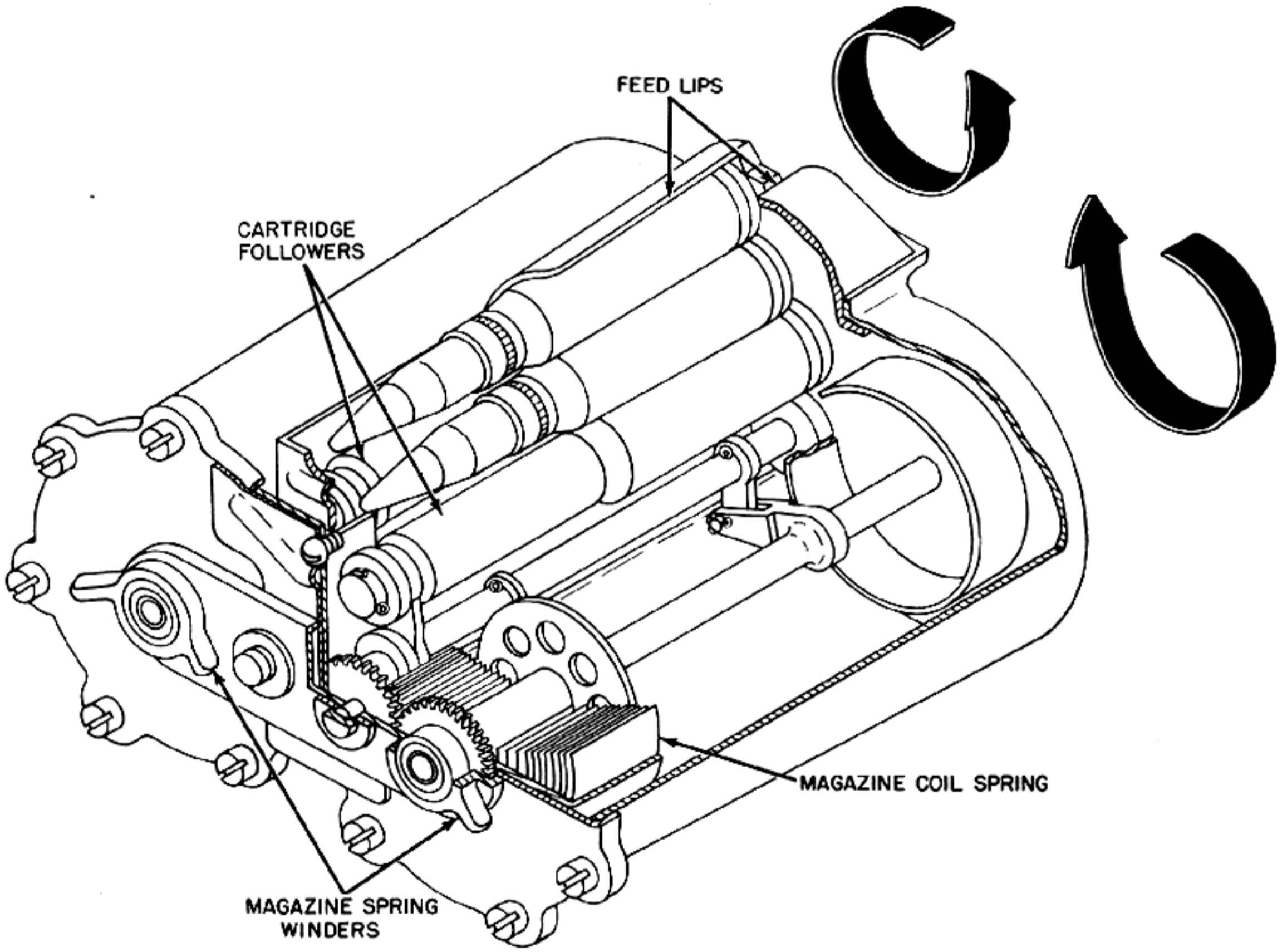


Figure 5-53. Twin-Drum Magazine Feeds Cartridges Alternately to the Guns.



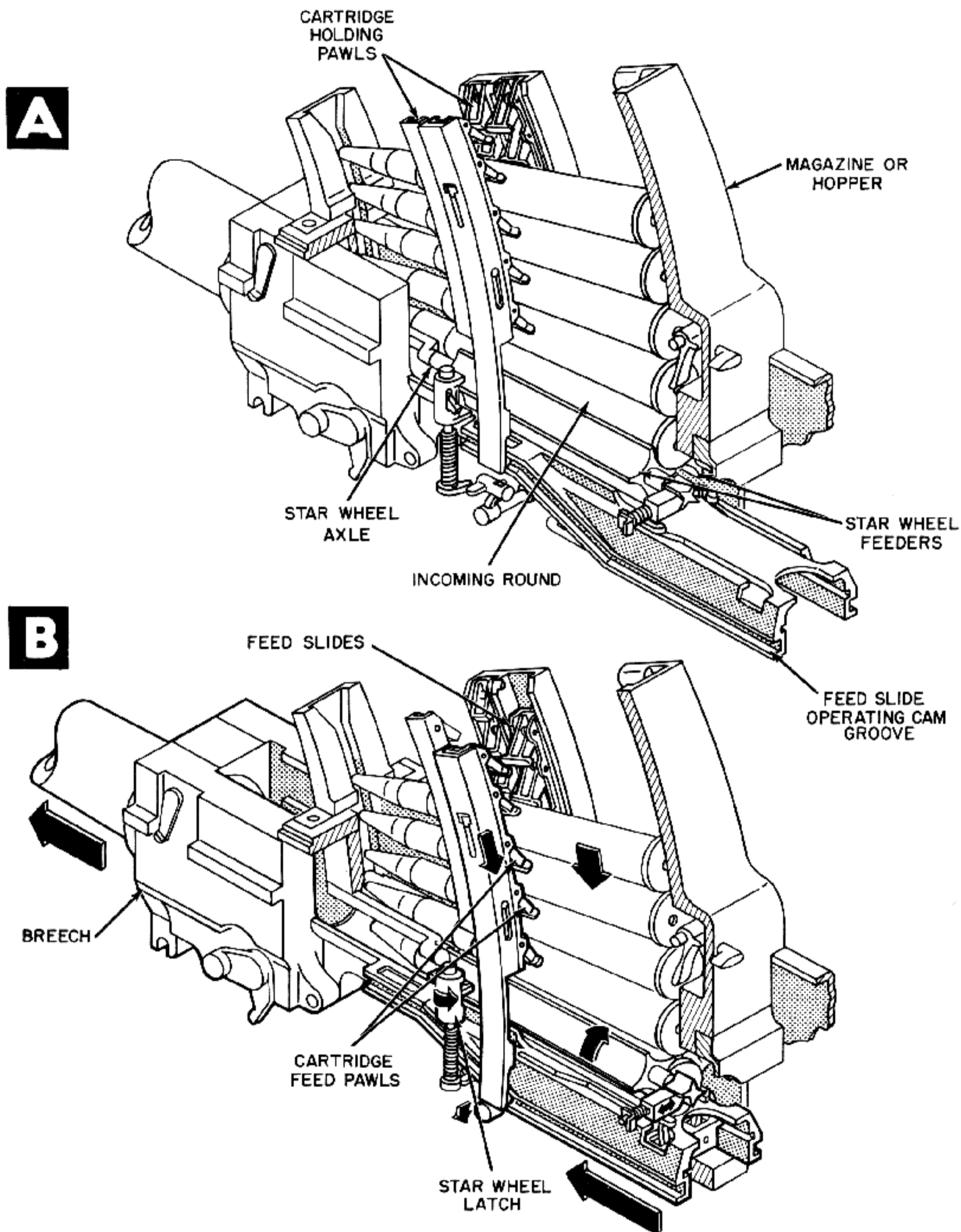
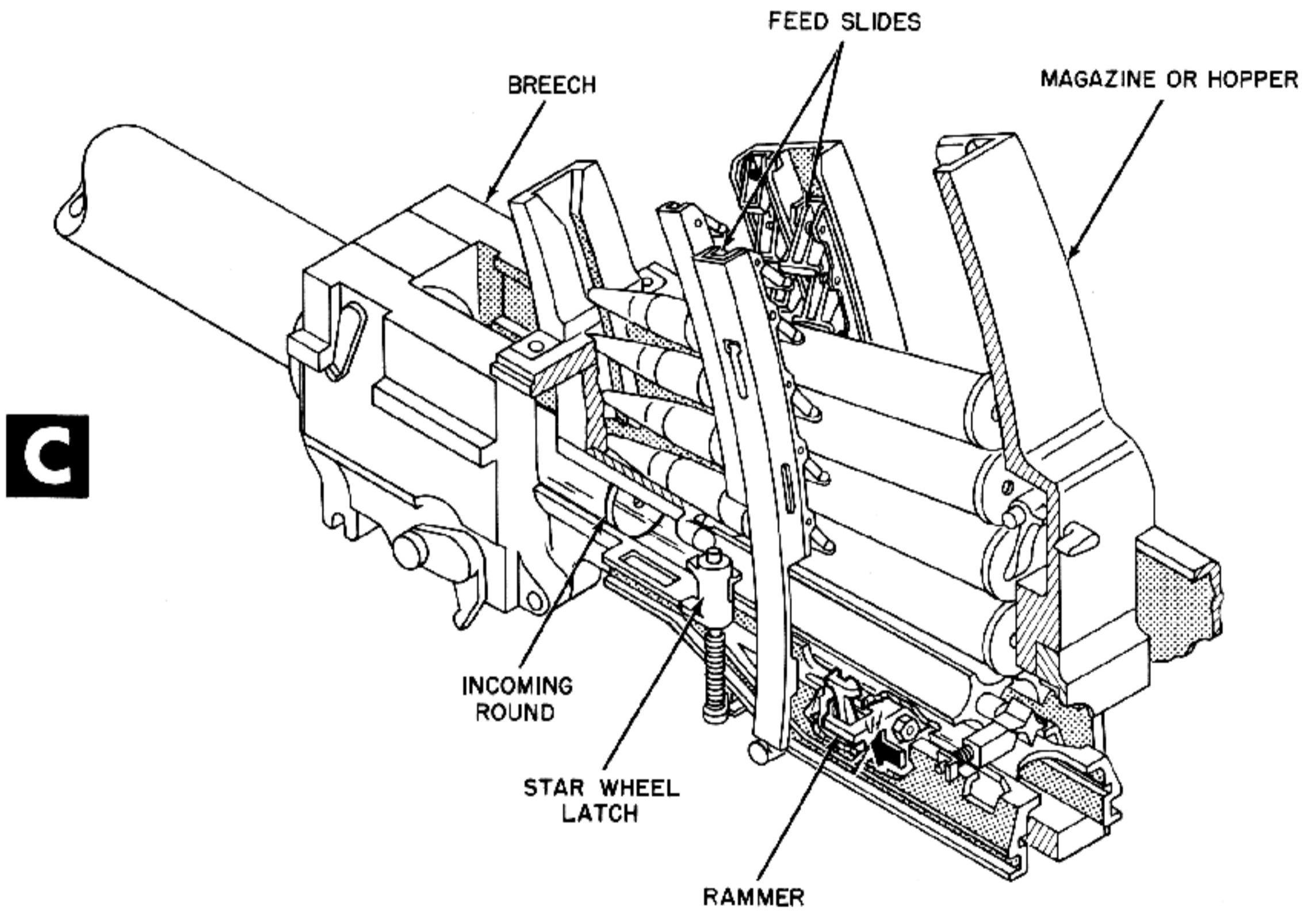


Figure 5-54. Recoiling Breech Actuates



Feed Slide and Rammer.

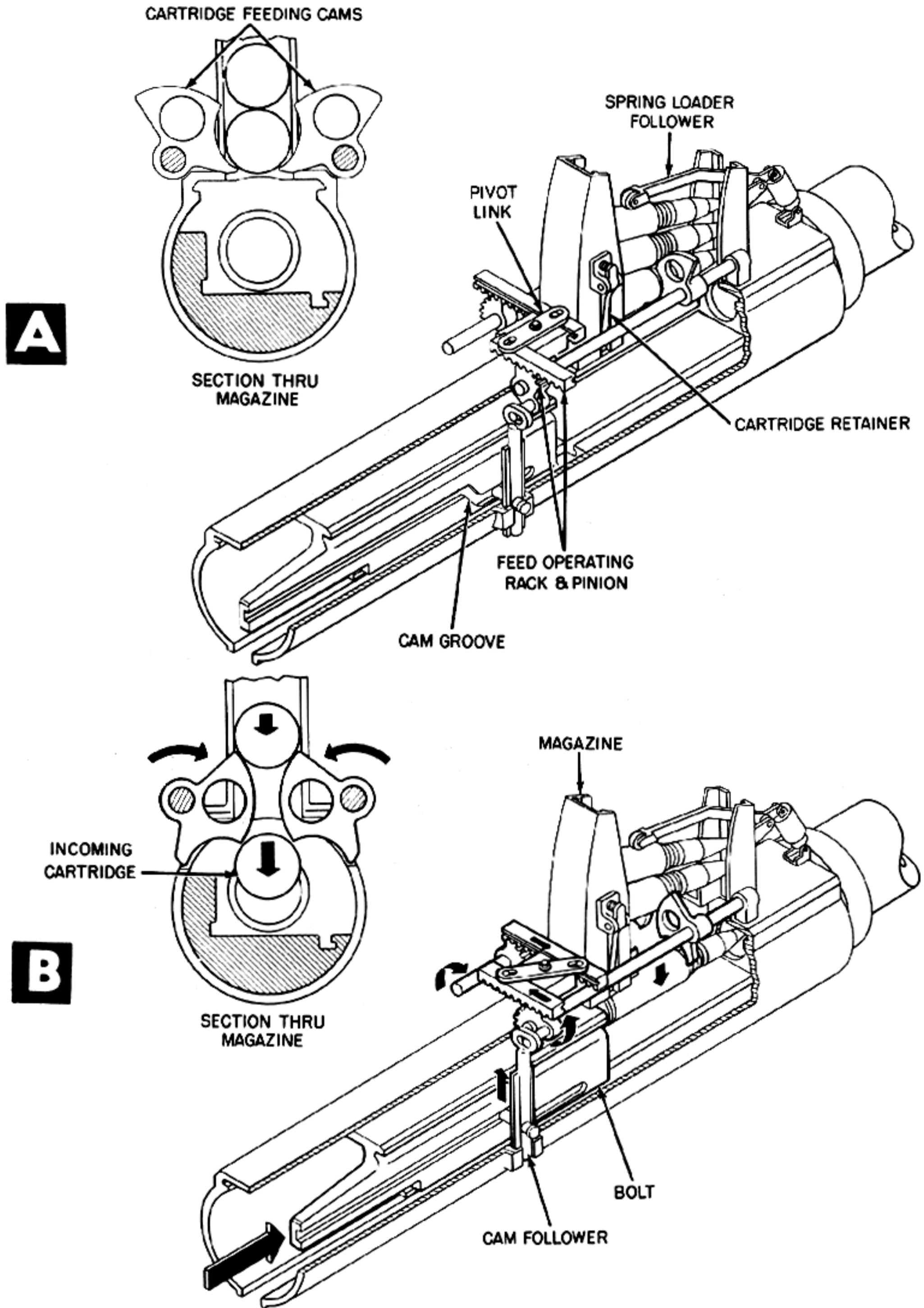


Figure 5-55. Recoiling Bolt Actuates Cartridge Feeding Cams.

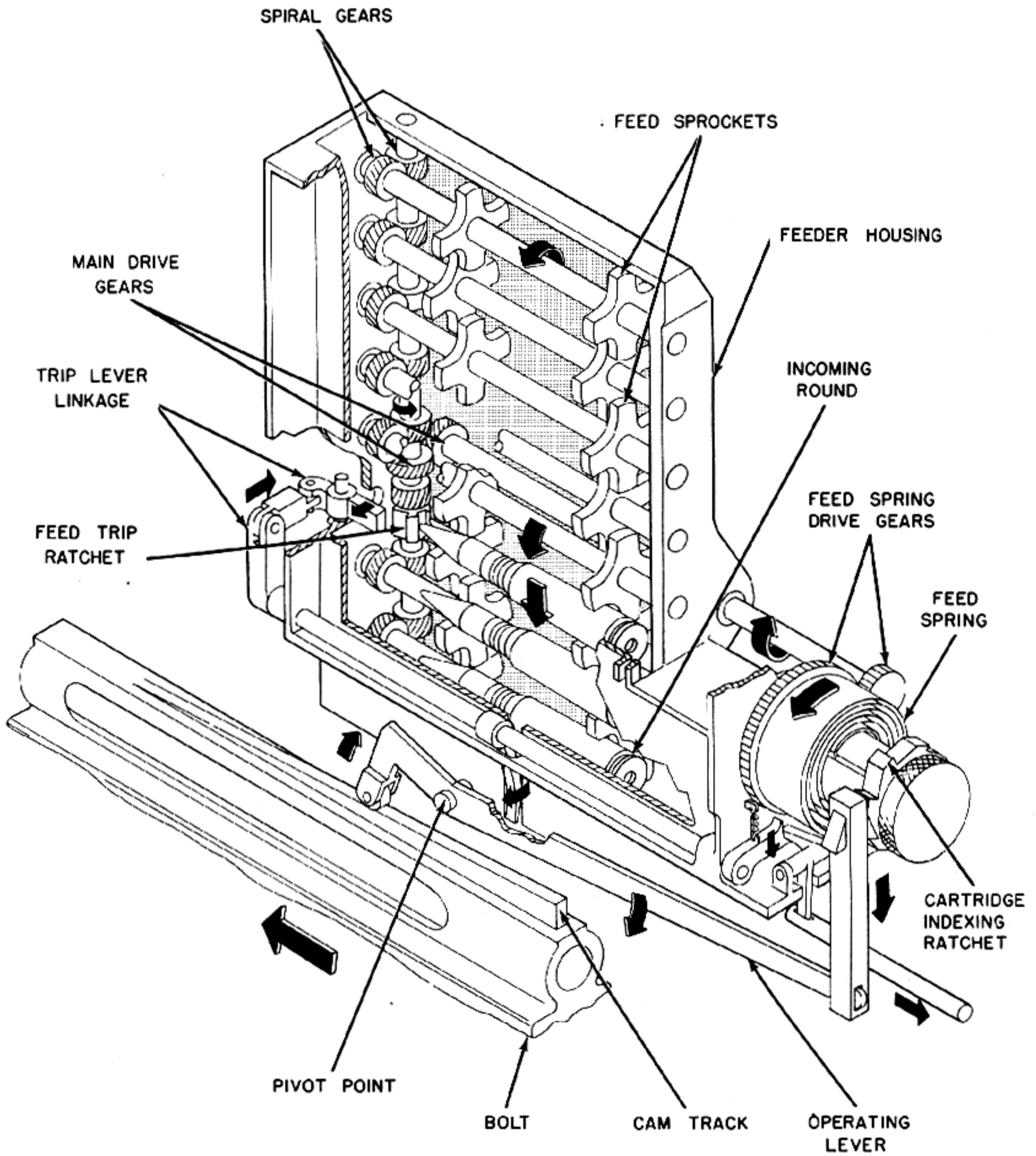


Figure 5-56. Cam Track on Bolt Actuates Spring-Loaded Feeder.



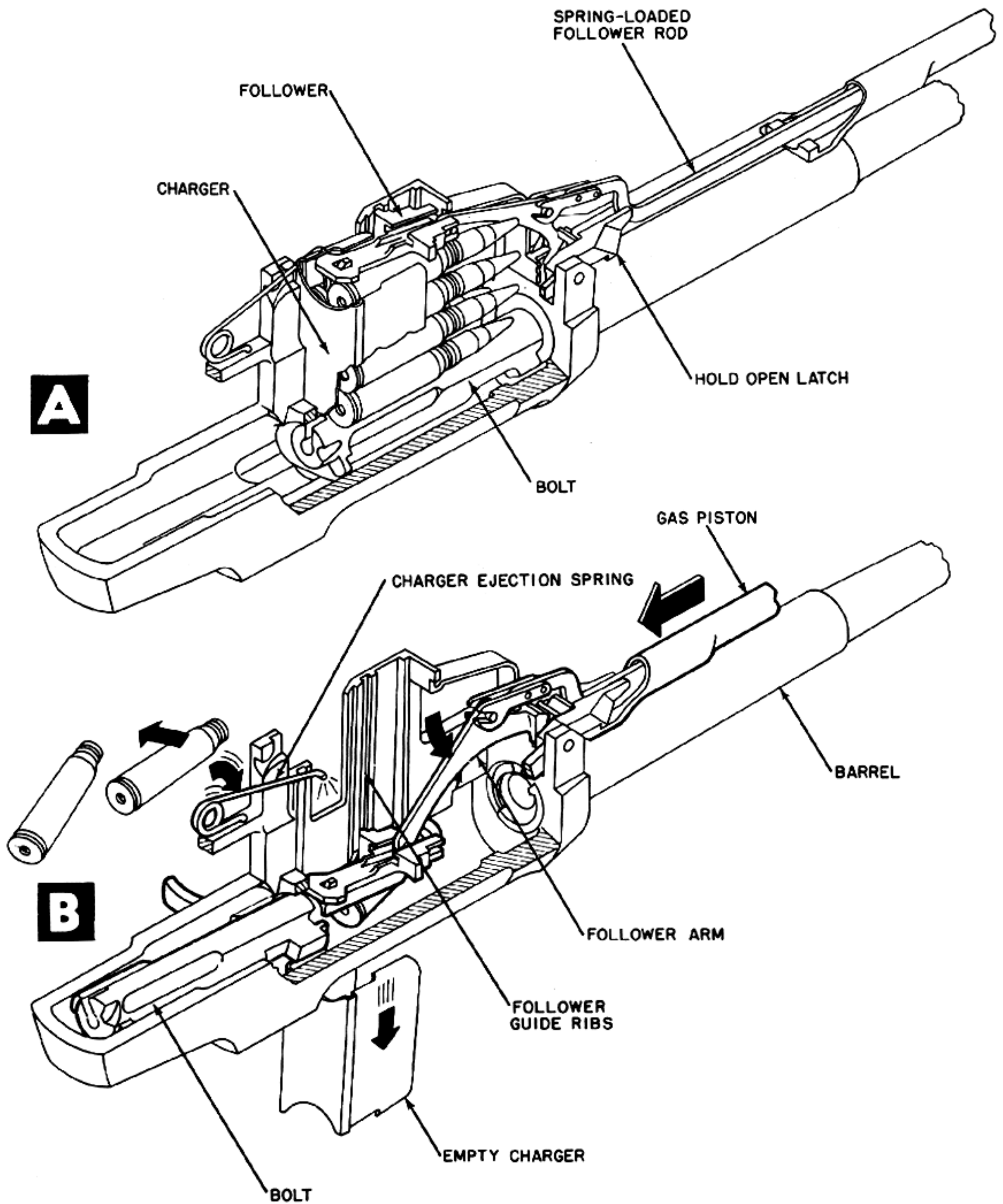


Figure 5-57. Method of Feeding Ammunition From a Charger.

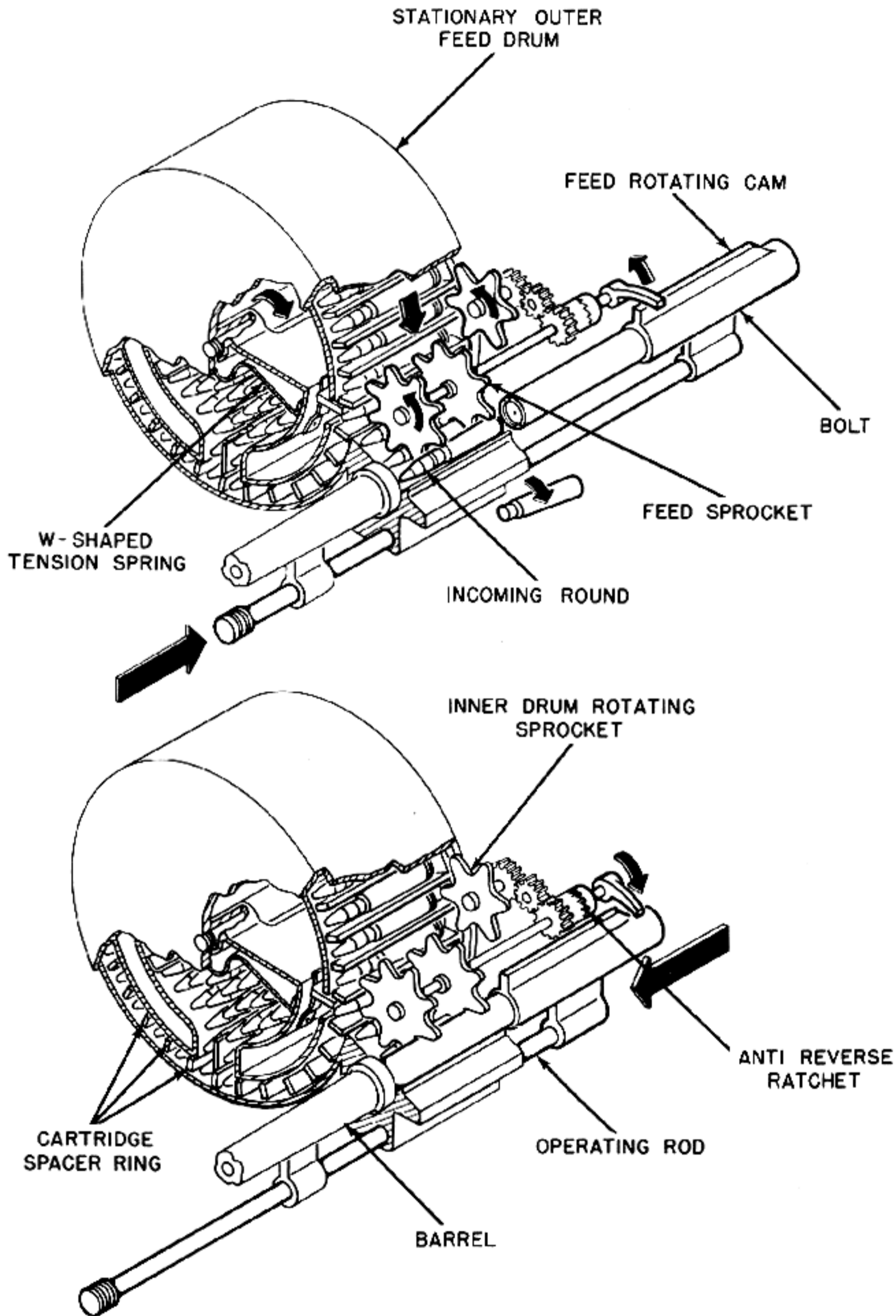


Figure 5-58. Cam on Bolt Rotates Feed Drum and Feed Sprocket.

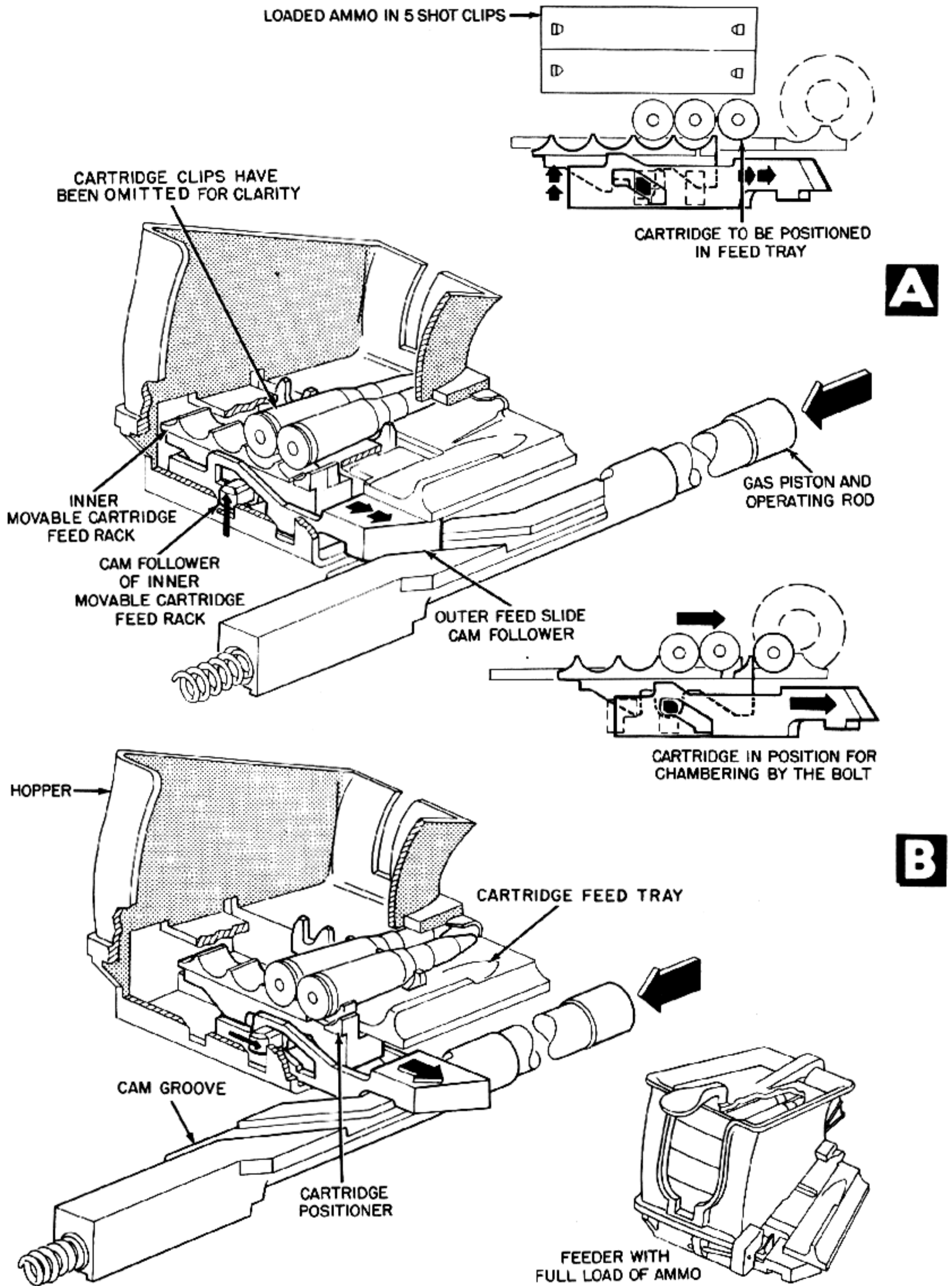
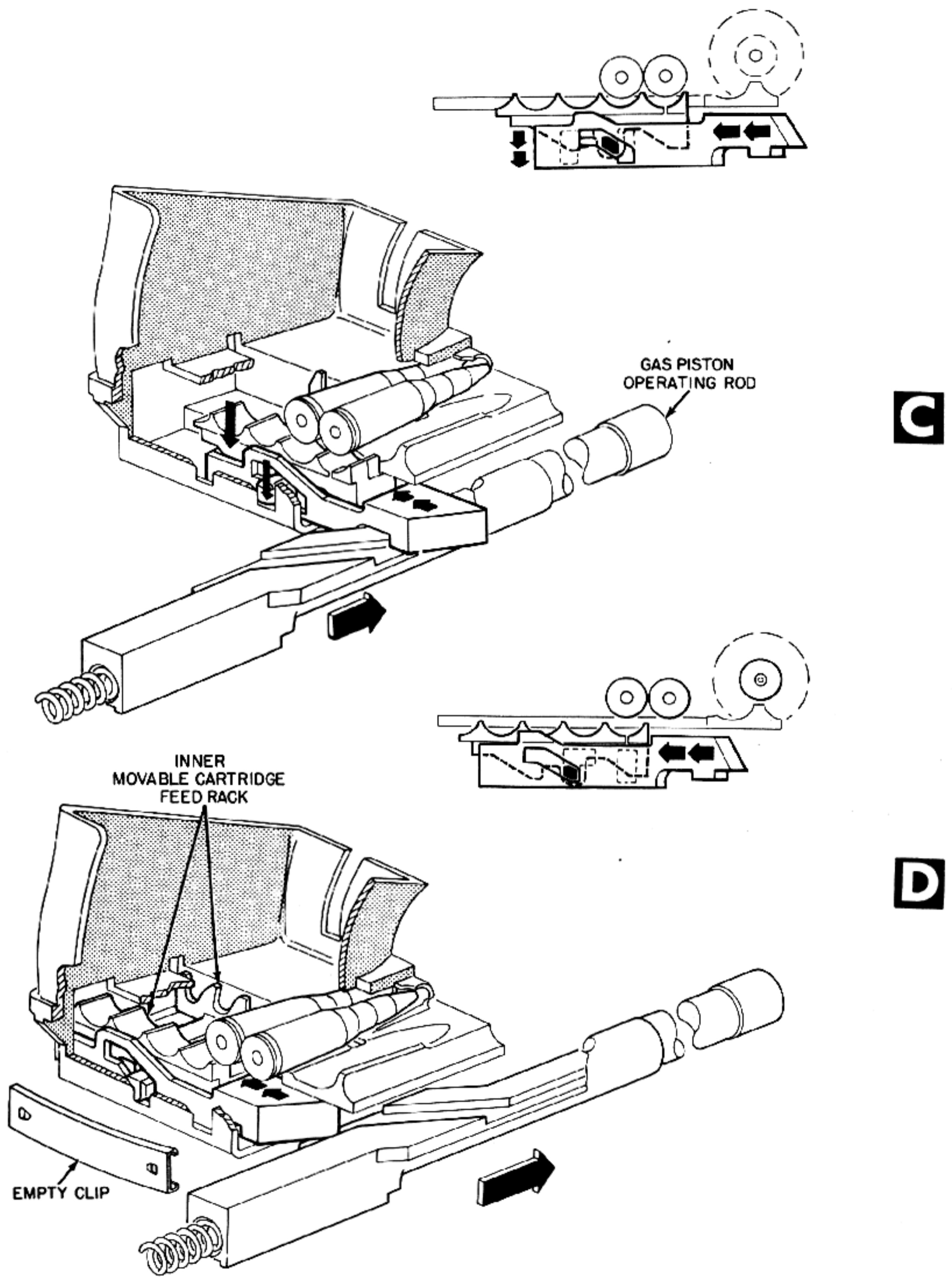


Figure 5-59. Cam-Operated Feed Rack Strips and



Positions Cartridges From 5-Round Clips.



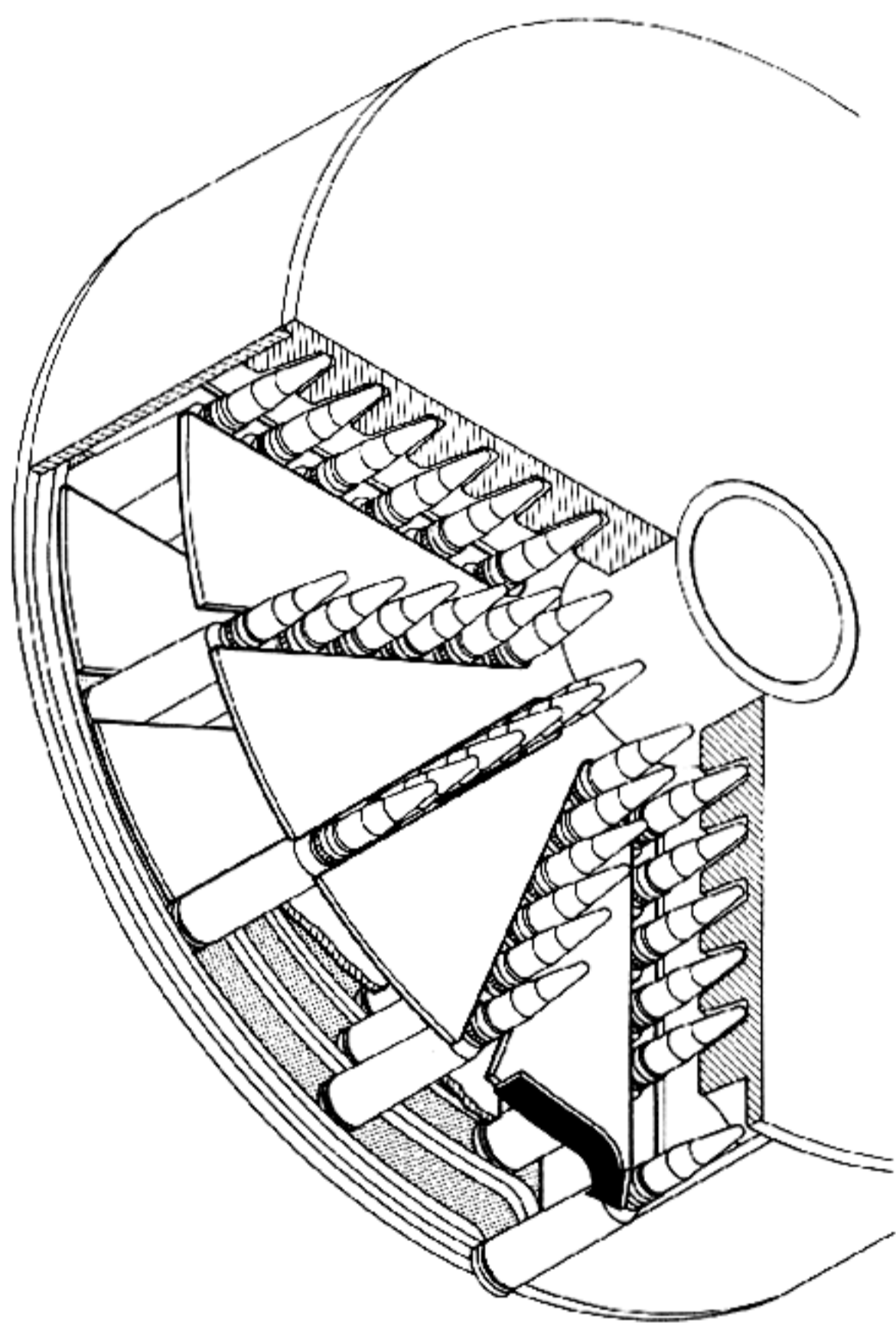


Figure 5-60. Rotating Sprocket Feeds Ammunition.

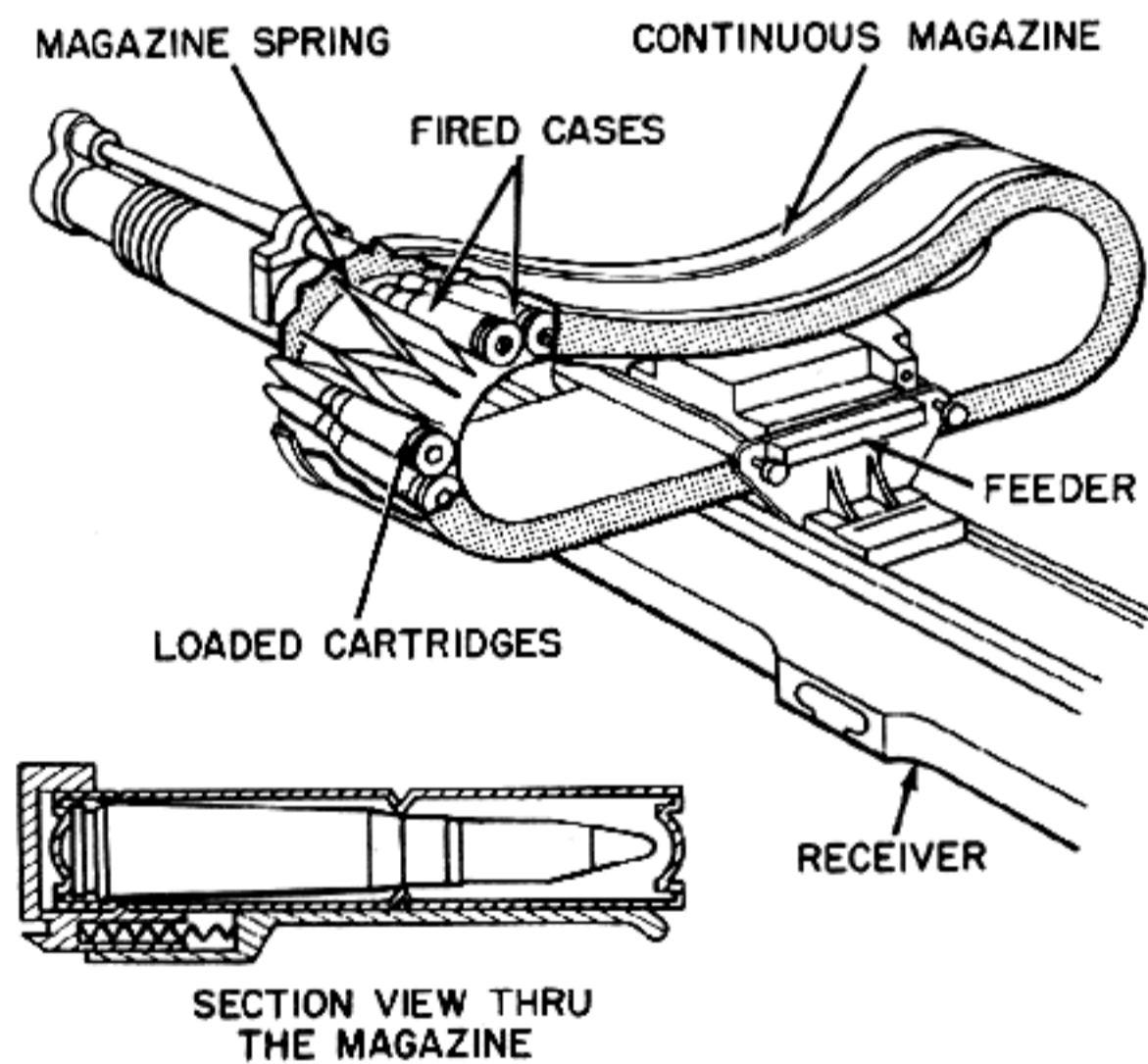


Figure 5-61. Continuous Magazine Retains Empty Cases.

G. Feed Accessories

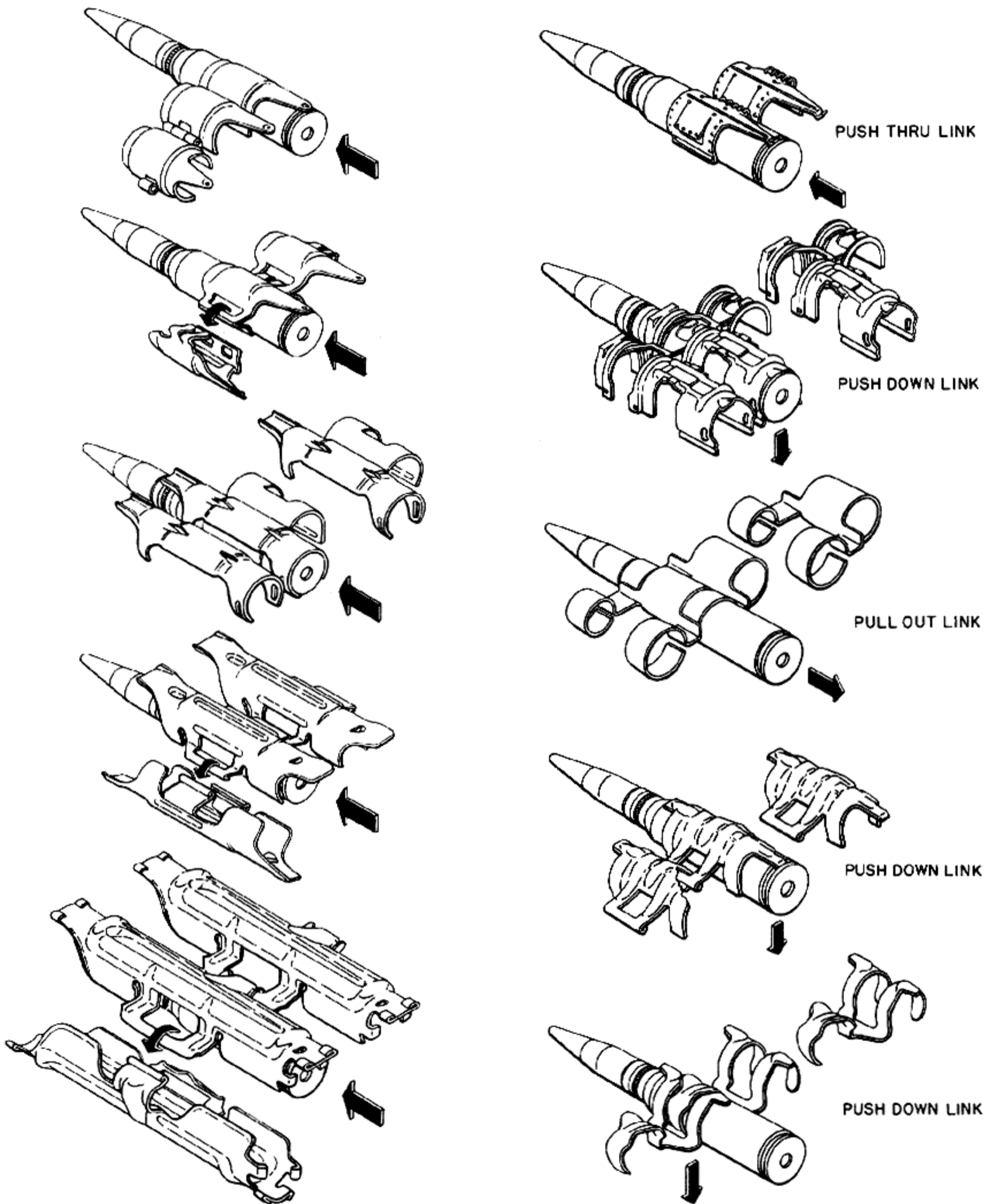


Figure 5-62. Types of Links.

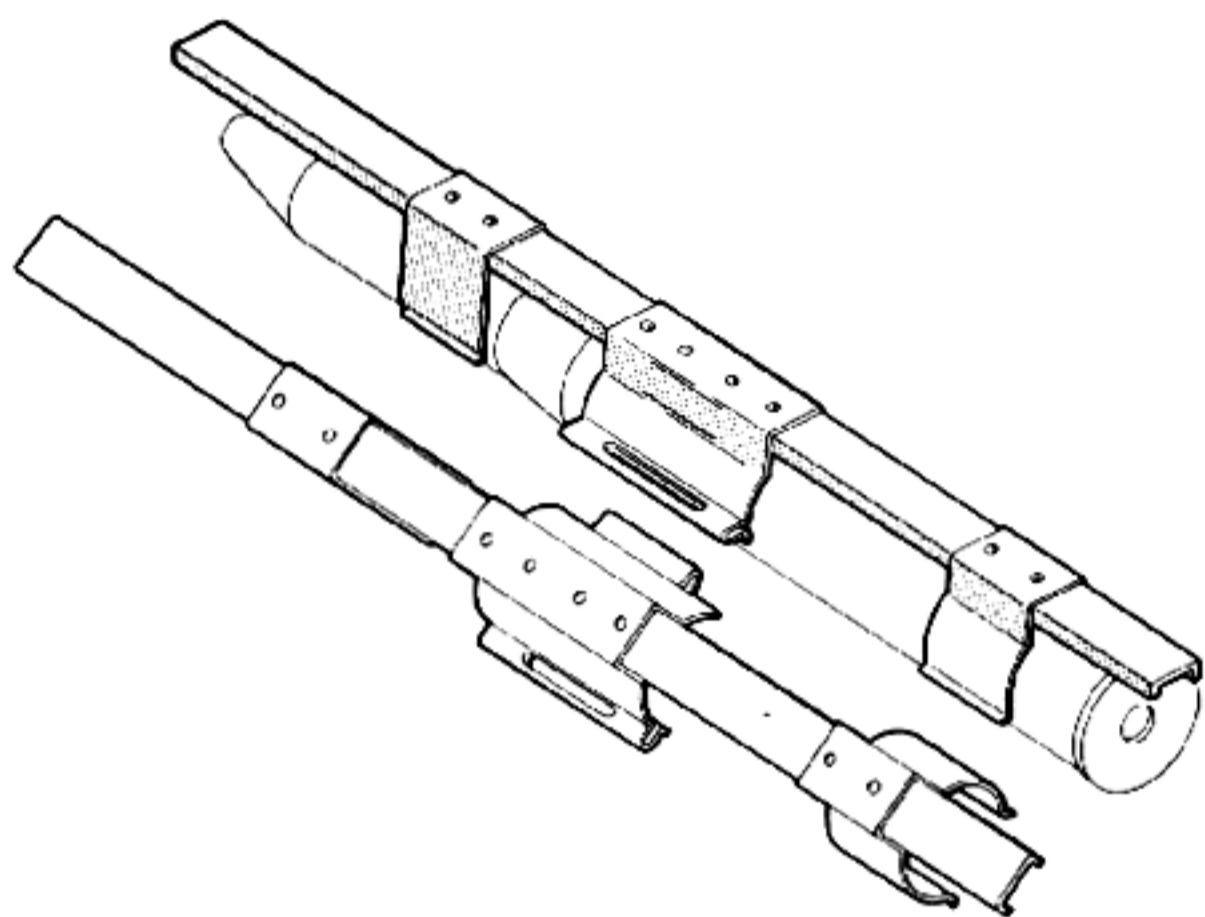


Figure 5-63. Example of Link for Large-Caliber Ammunition.

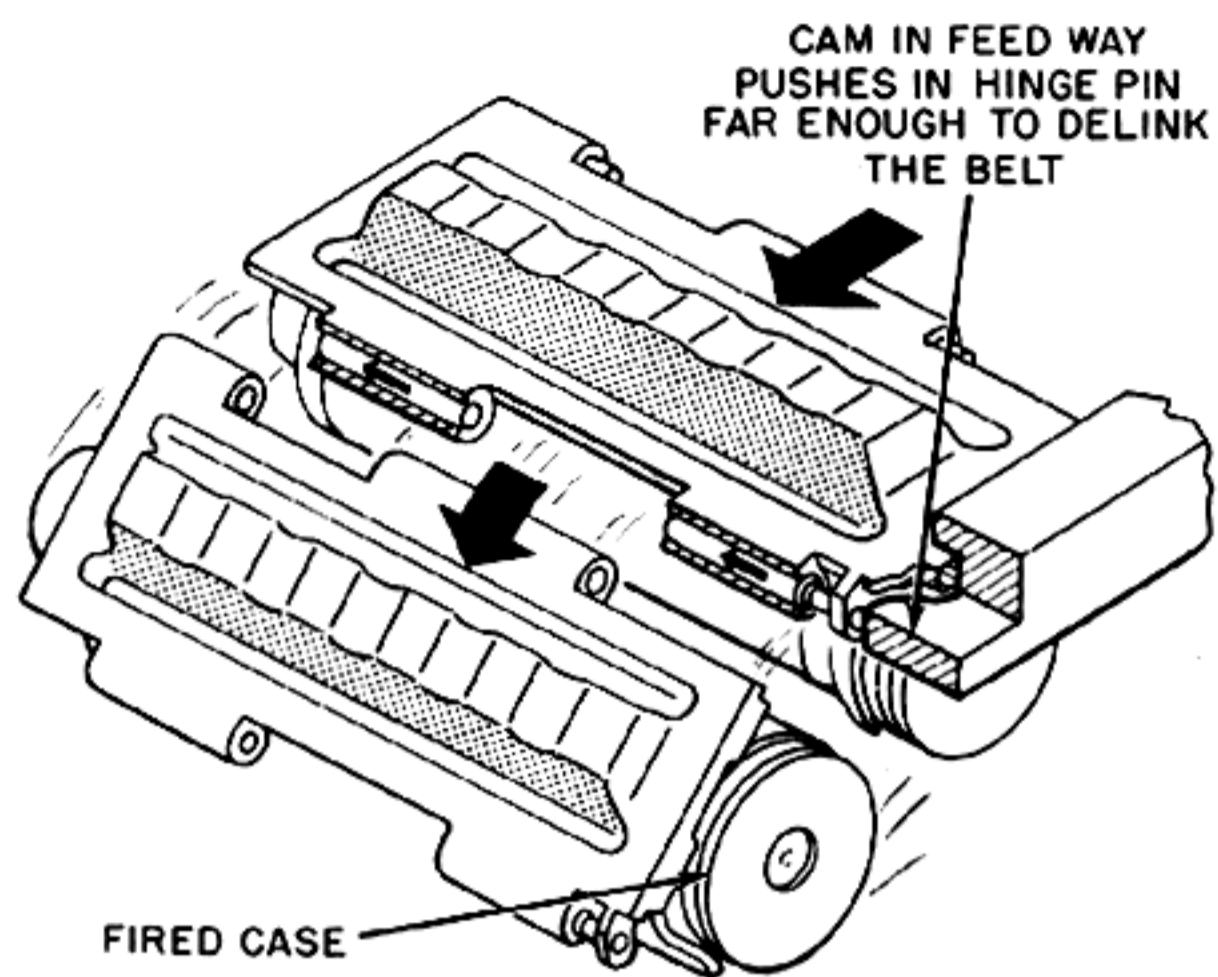


Figure 5-64. Belt Delinker.

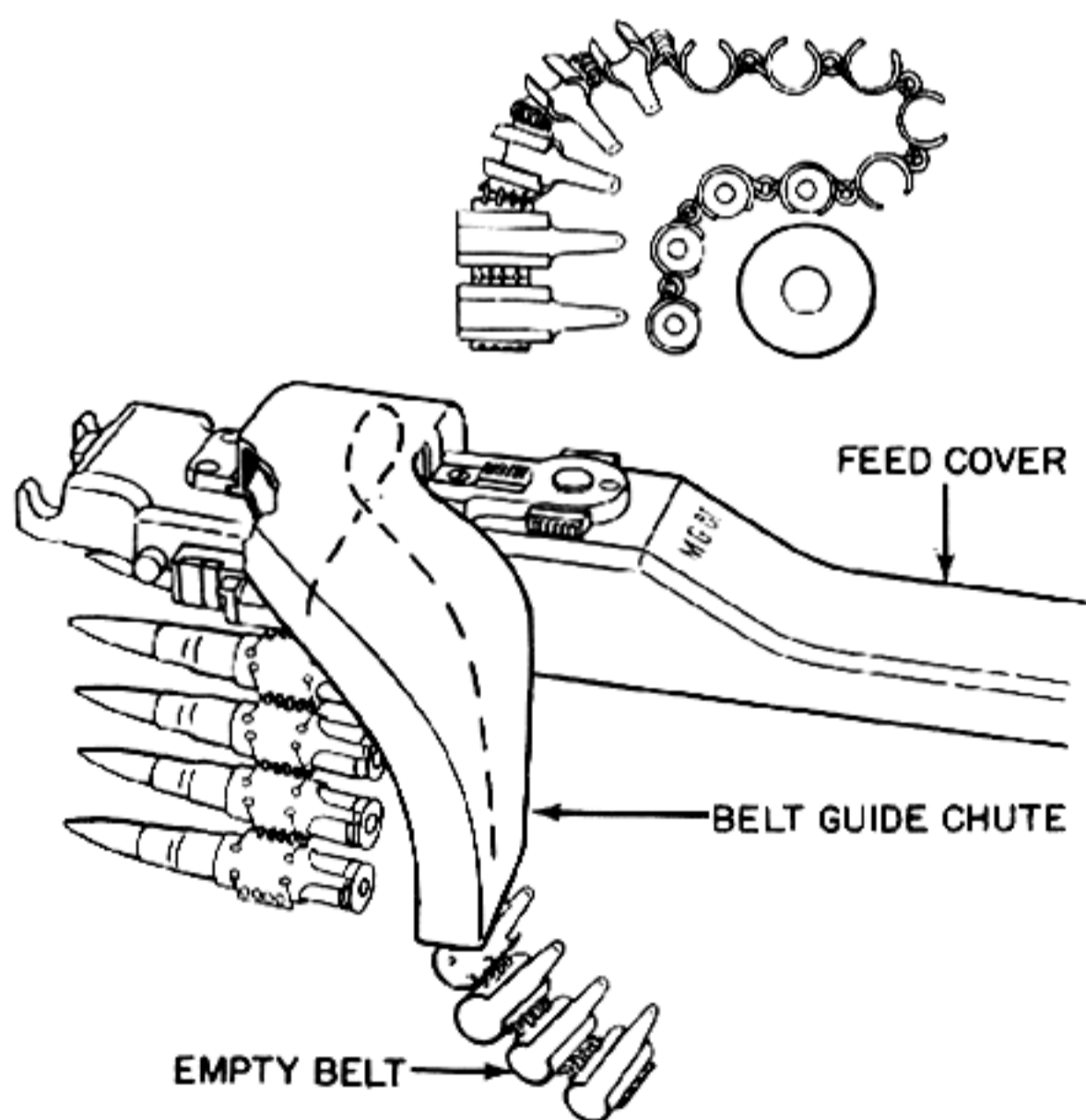


Figure 5-65. Belt Feed Guide Leads Belt Out on Same Side as It Enters.

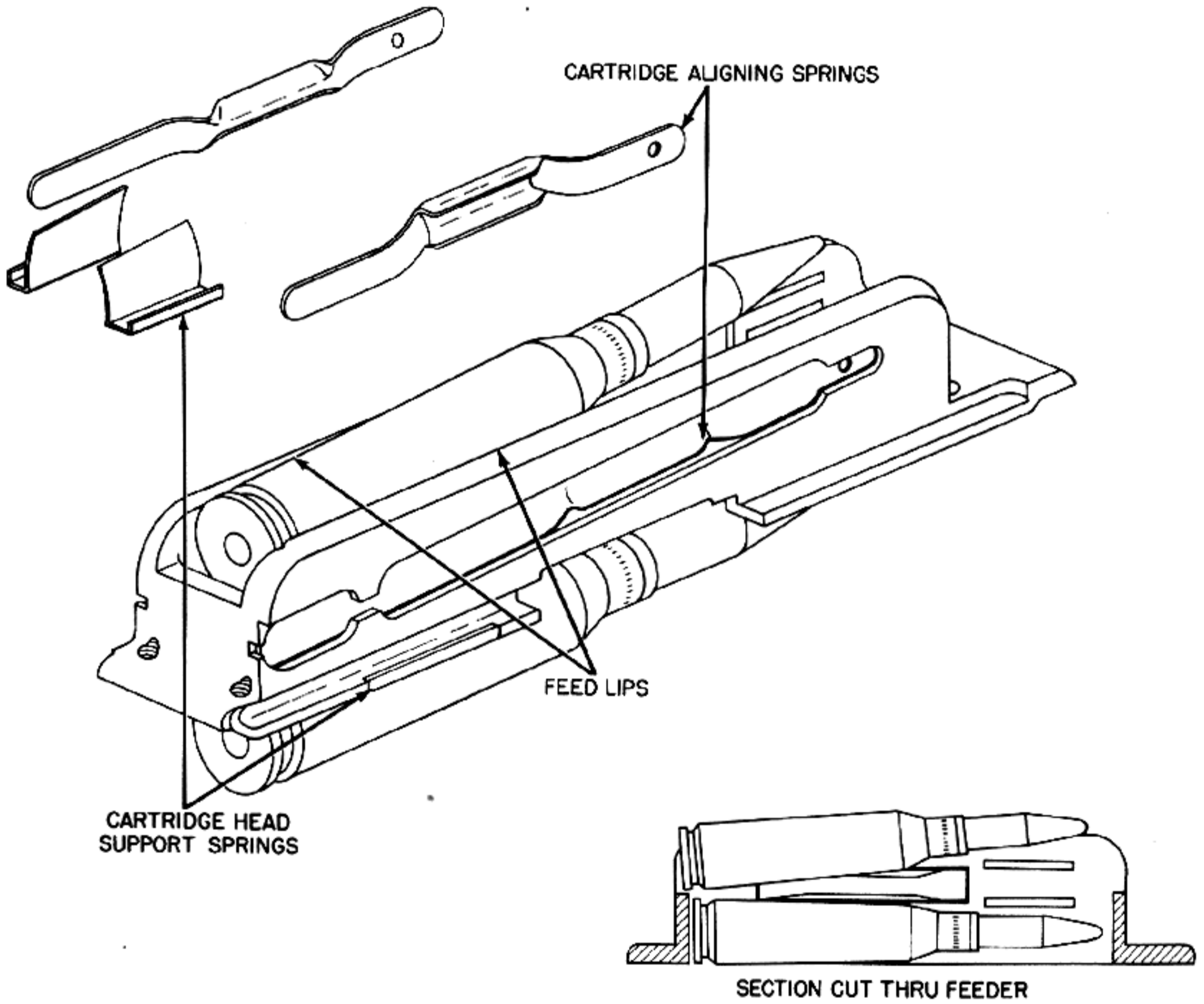


Figure 5-66. Cartridge Aligning Springs Support and Position the Round.



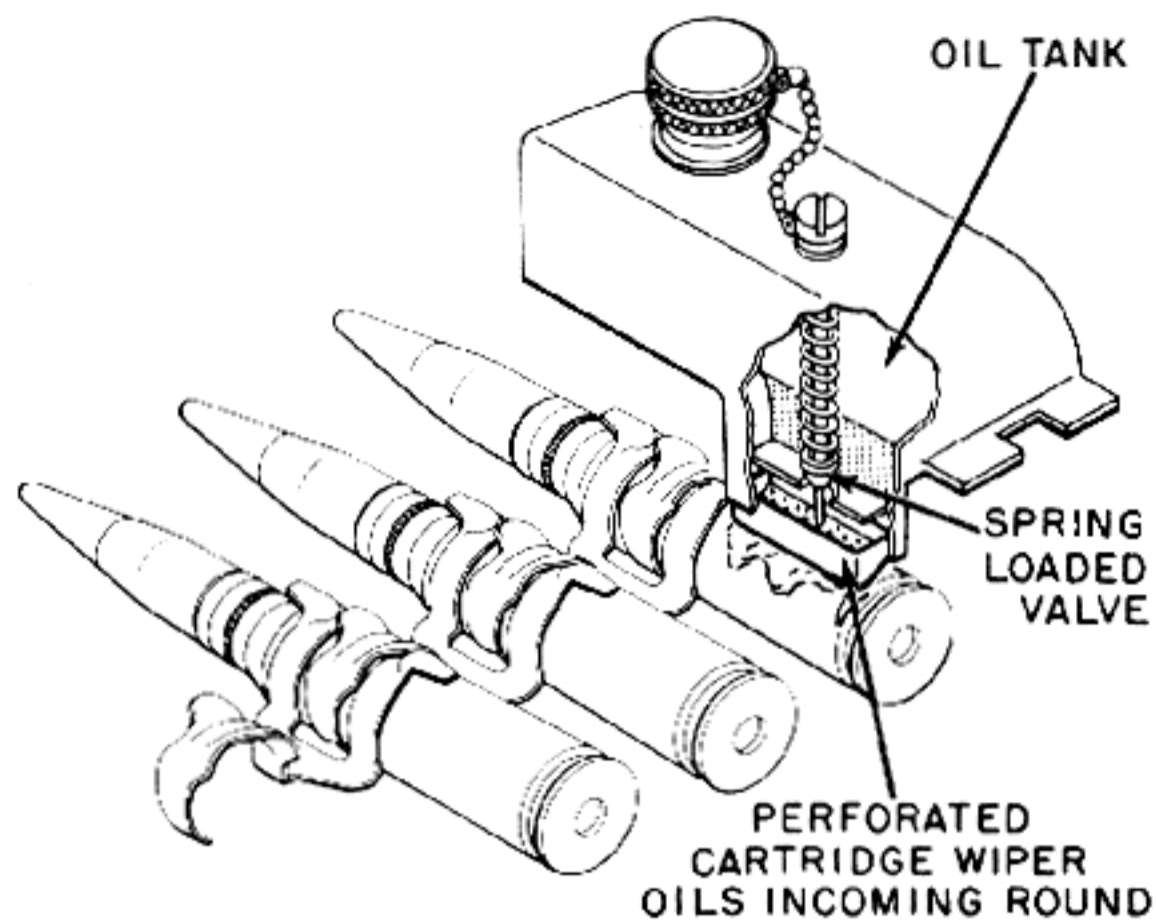


Figure 5-67. Oiler Valve Actuated by Movement of Cartridges Through Feedway.

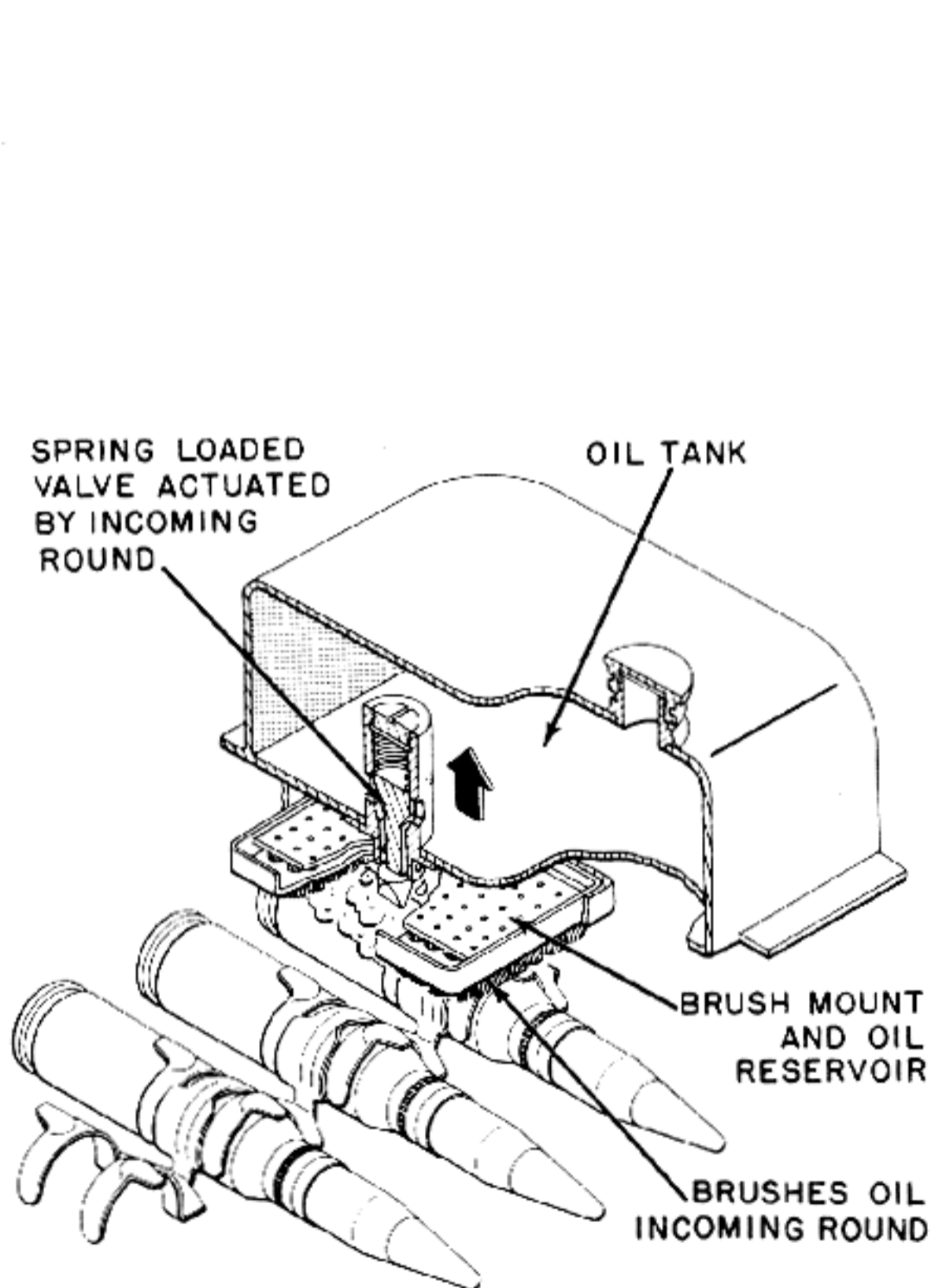


Figure 5-68. Oiler Valve Actuated by Movement of Cartridges Through Feedway, Wetting the Wiper Brushes.

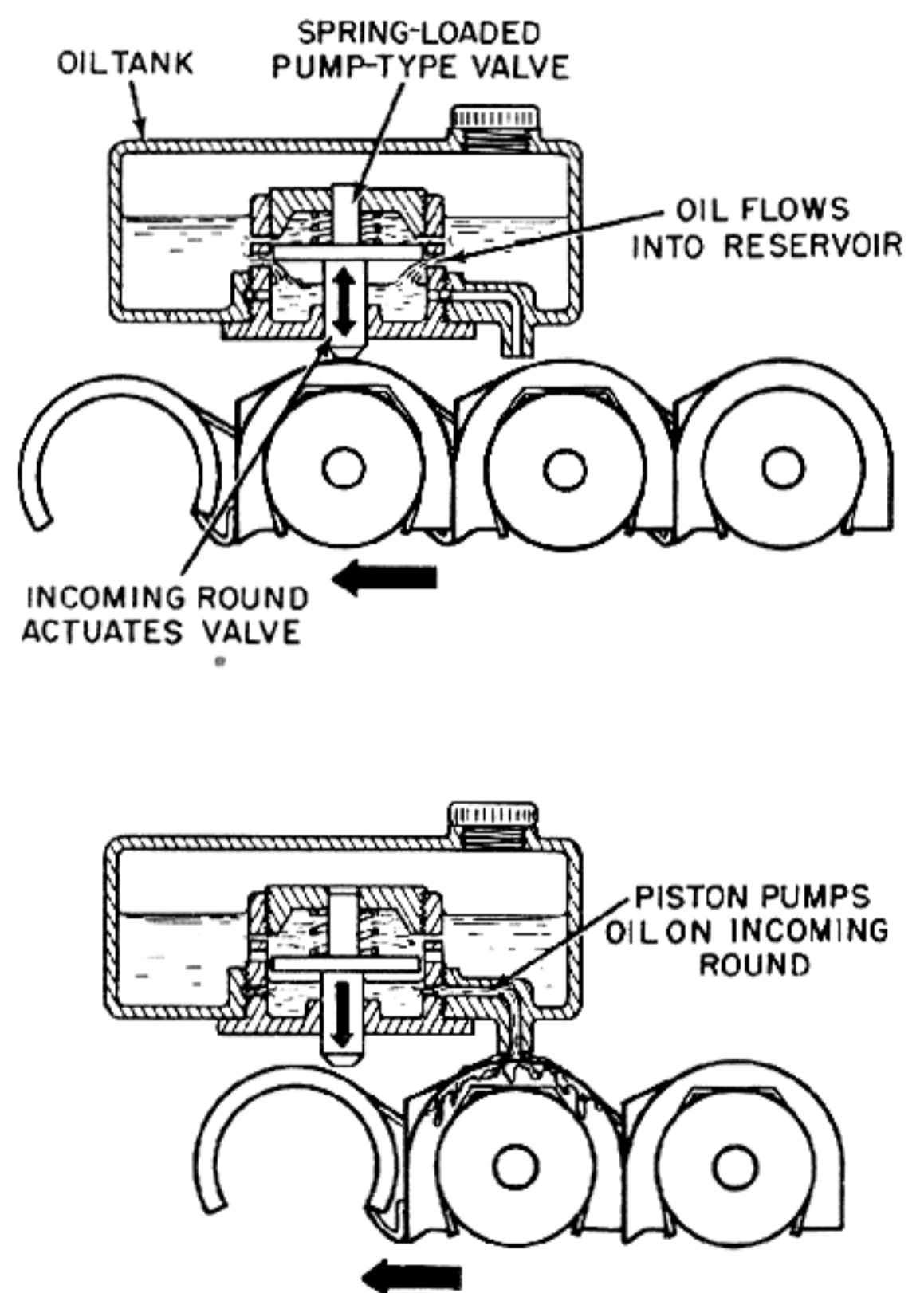


Figure 5-69. Oiler Valve Actuated by Incoming Round. Pump Oils Next Round as Belt Moves Out From Under Plunger.

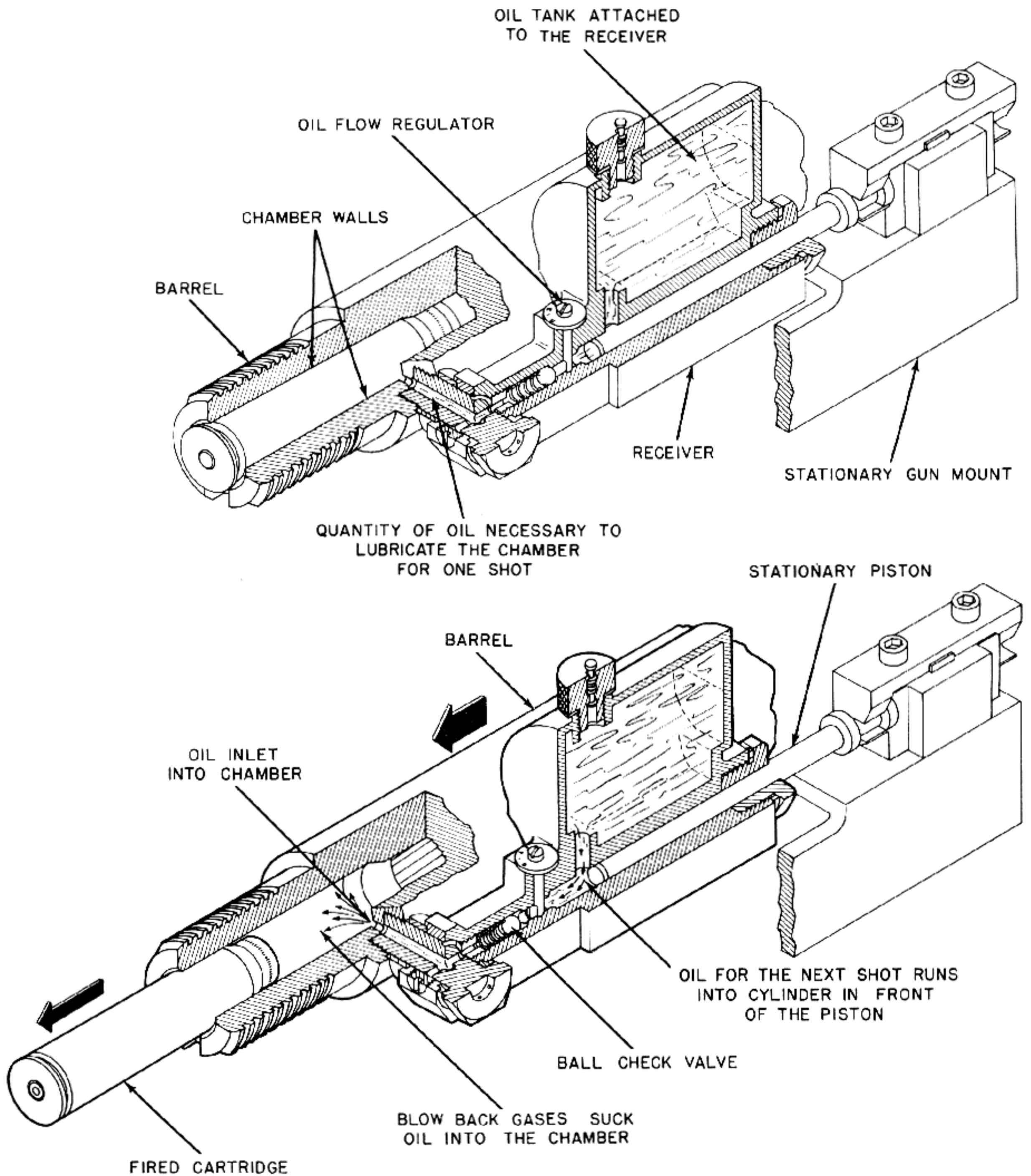


Figure 5-70. Blowback Gases Atomize Small Quantity of Oil, Lubricating Chamber. Oil Is Pumped by Action of Recoiling Gun.

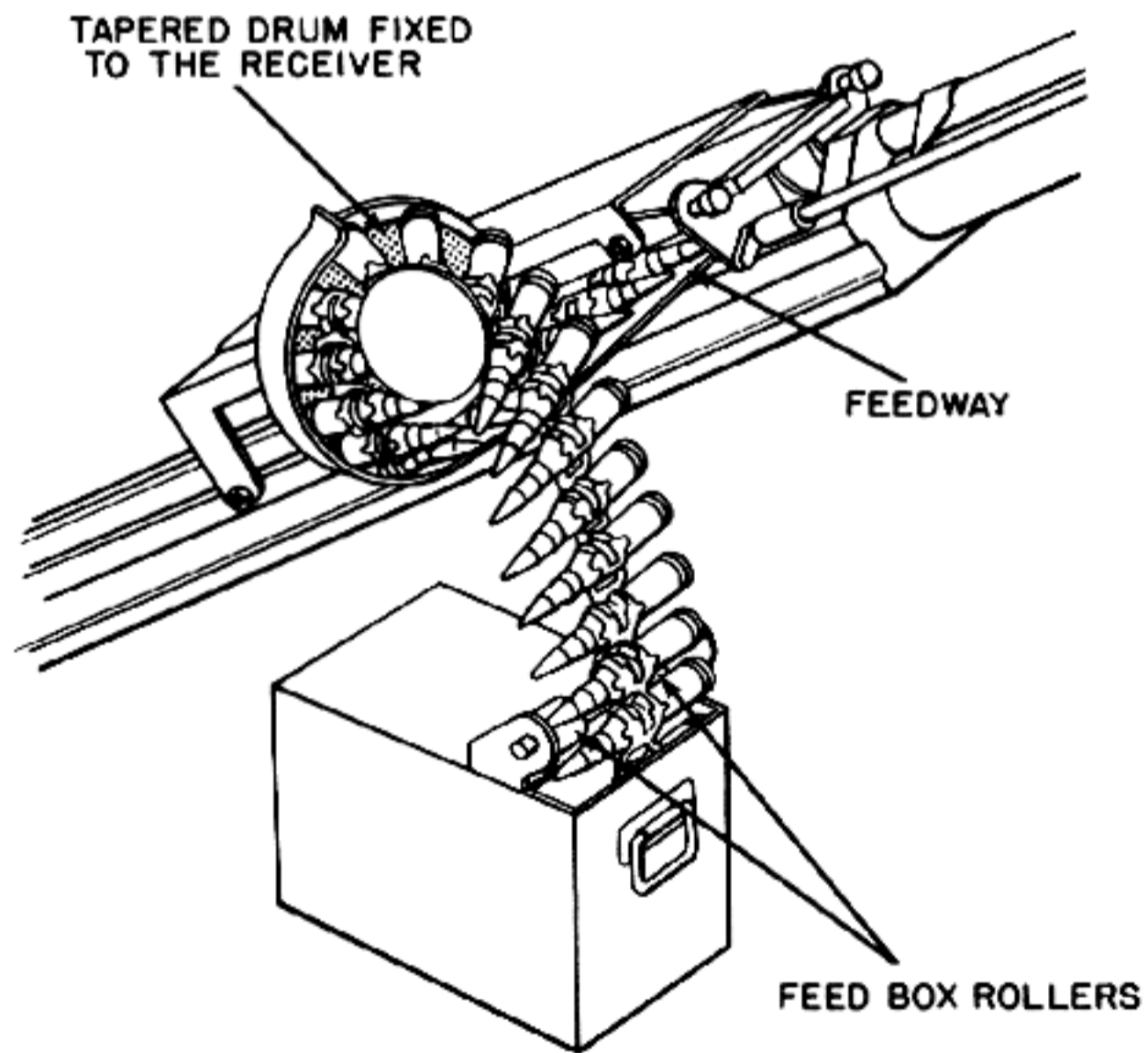
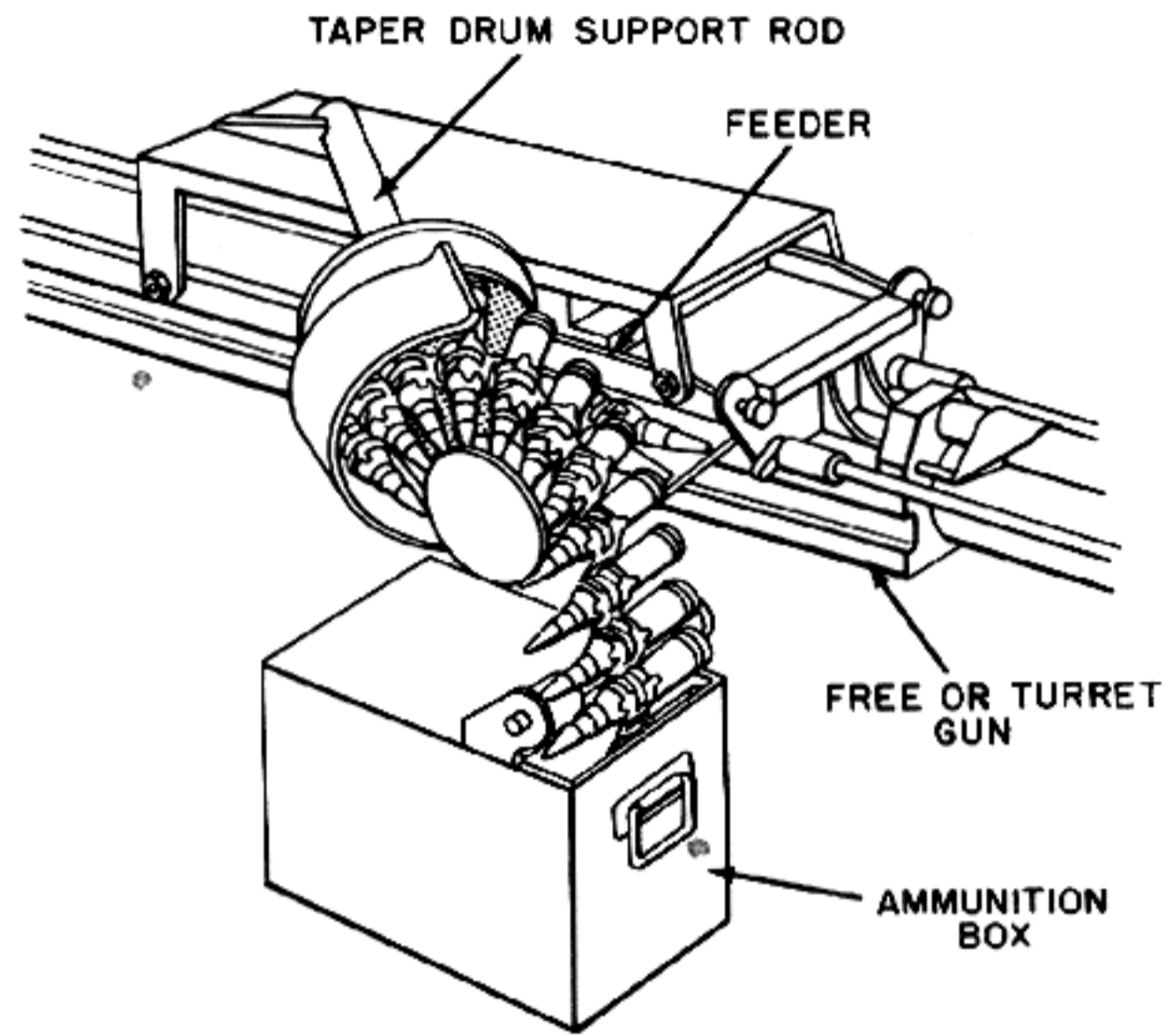


Figure 5-71. Kink-Proof Belt Guide.

## Chapter 6

# LOCKING SYSTEMS

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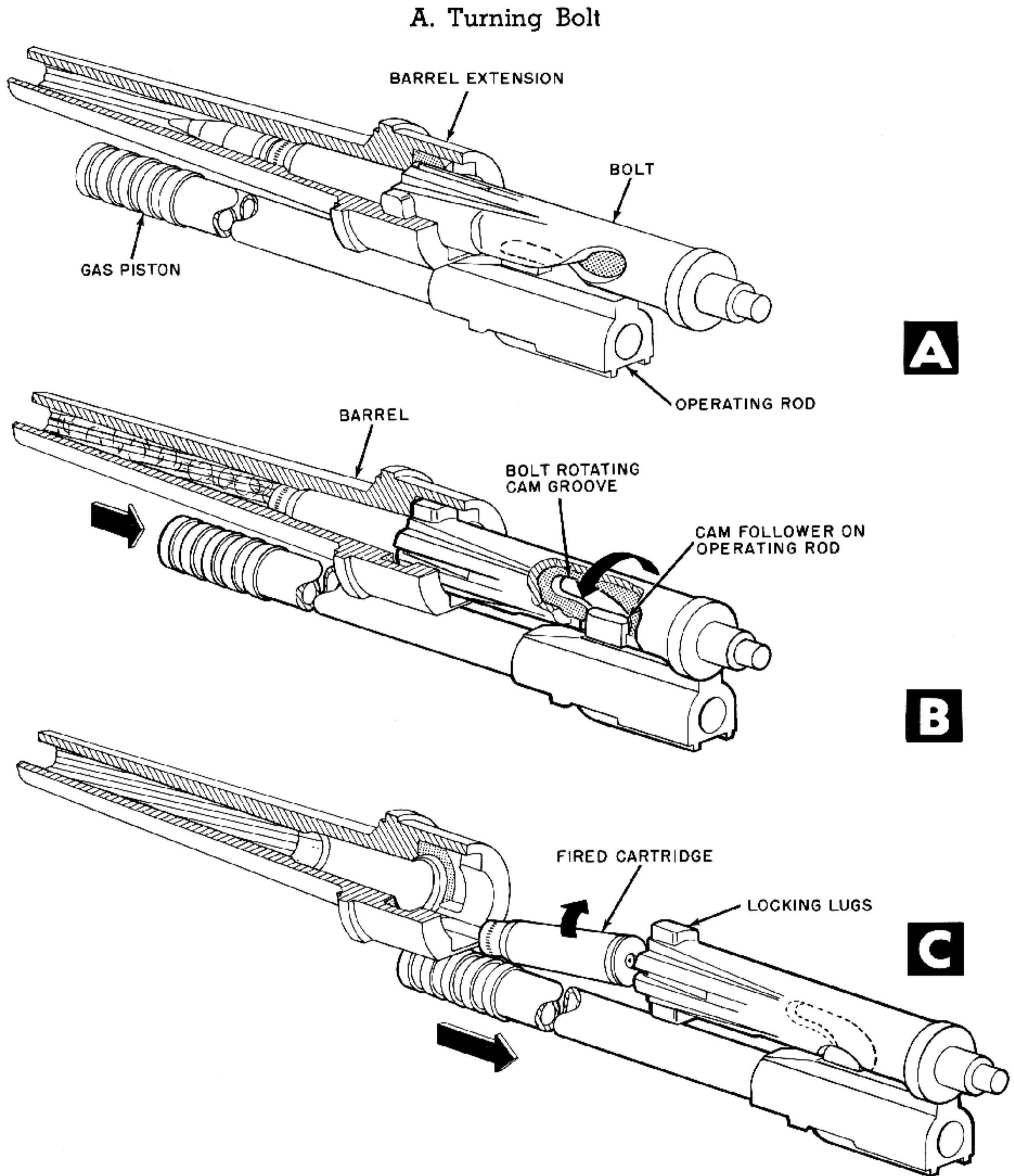


Figure 6-1. Solid Bolt Unlocked by Action of Operating Rod on Cam Groove in the Bolt.

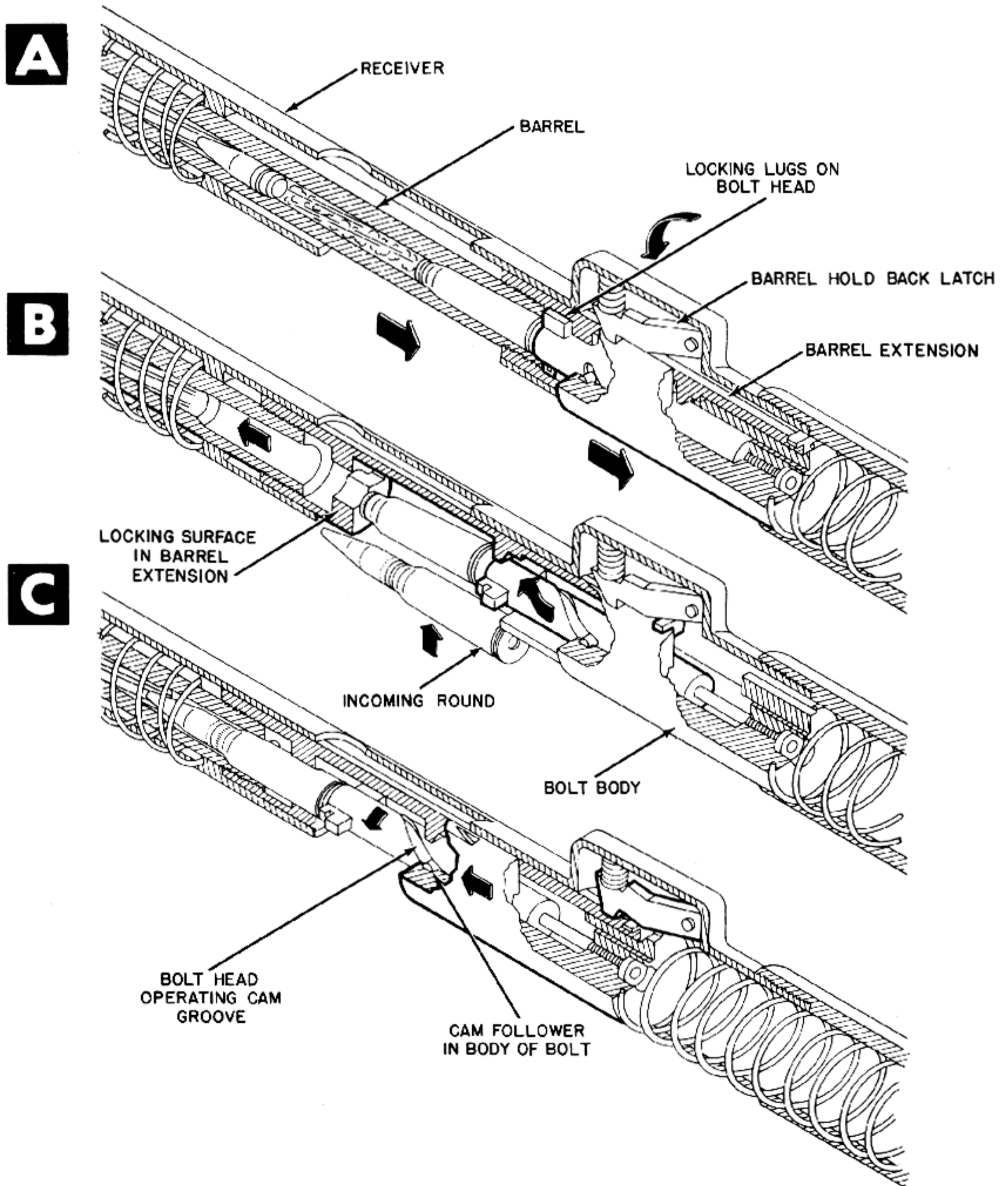


Figure 6-2. Solid Bolt Is Unlocked by the Counter-Recoiling Barrel Extension.

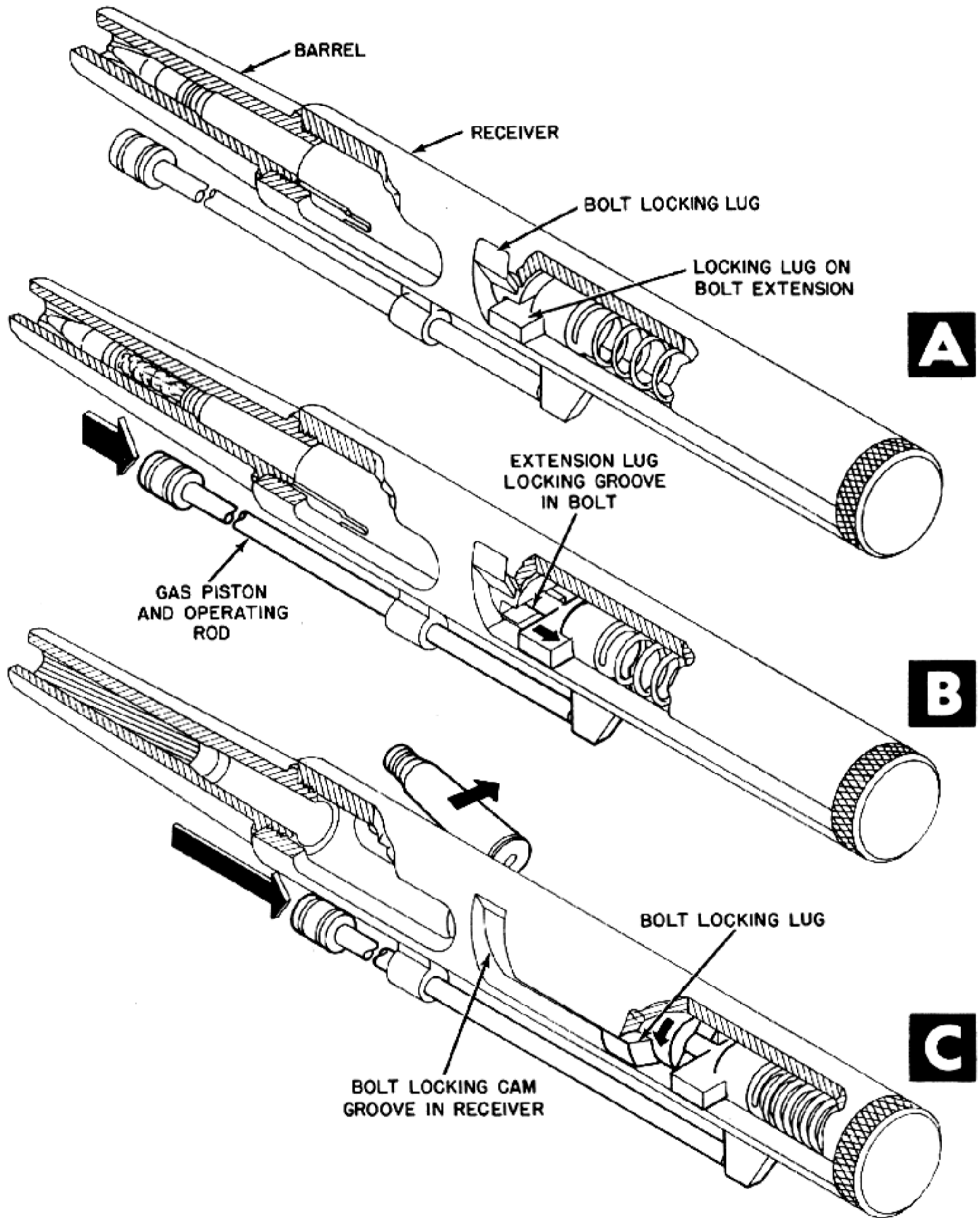


Figure 6-3. Gas Piston Actuates Locking Lug on Bolt Extension. Gas Pressure Then Unlocks Bolt.

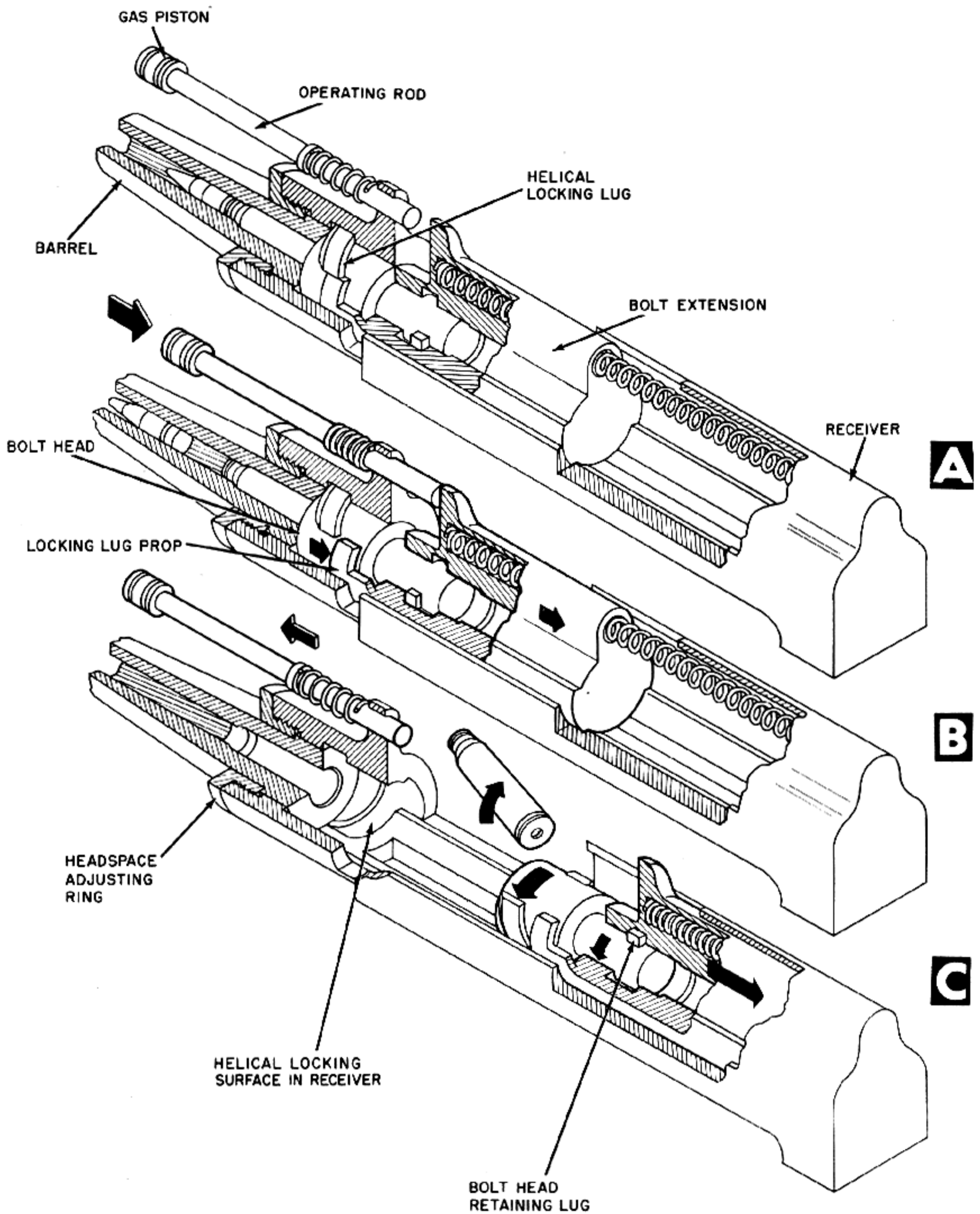


Figure 6-4. Gas Piston Actuates Locking Lug Prop. Gas Pressure Then Unlocks Bolt.



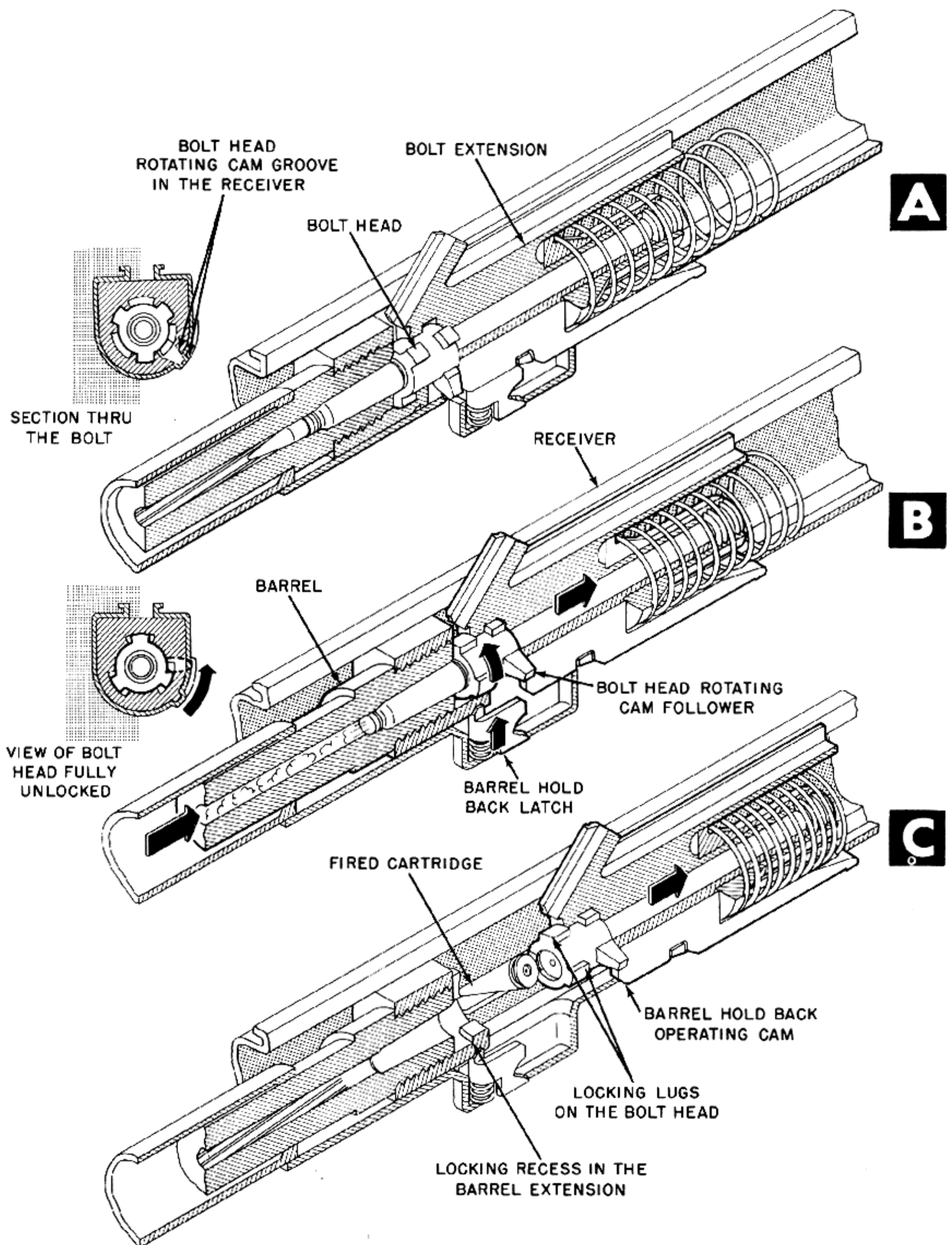
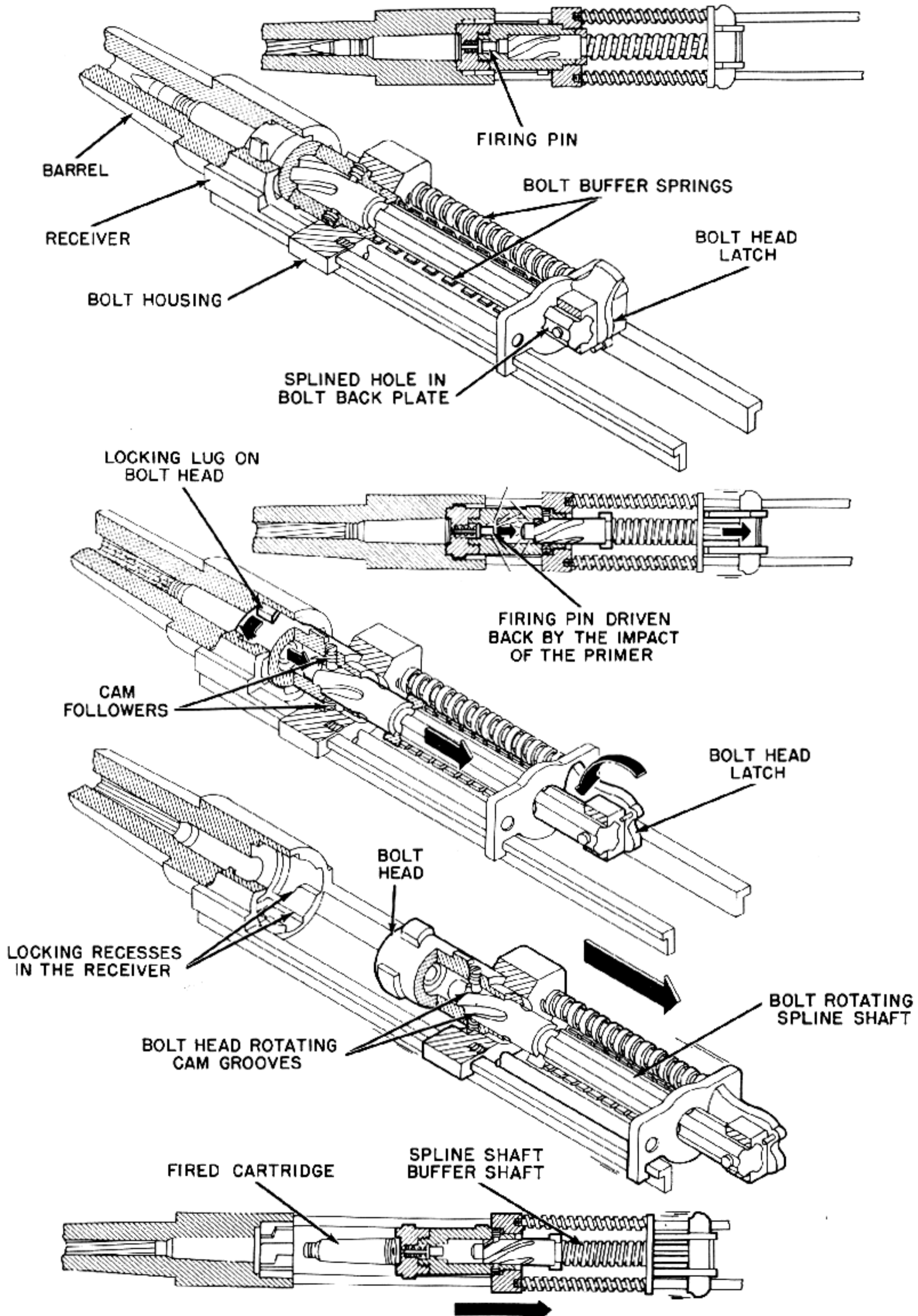


Figure 6-5. Solid Bolt Head Is Unlocked by Cam Groove in the Receiver.



**A**

**B**

**C**

Figure 6-6. Rearward Thrust of Primer and Firing Pin Causes Bolt Head To Be Unlocked.

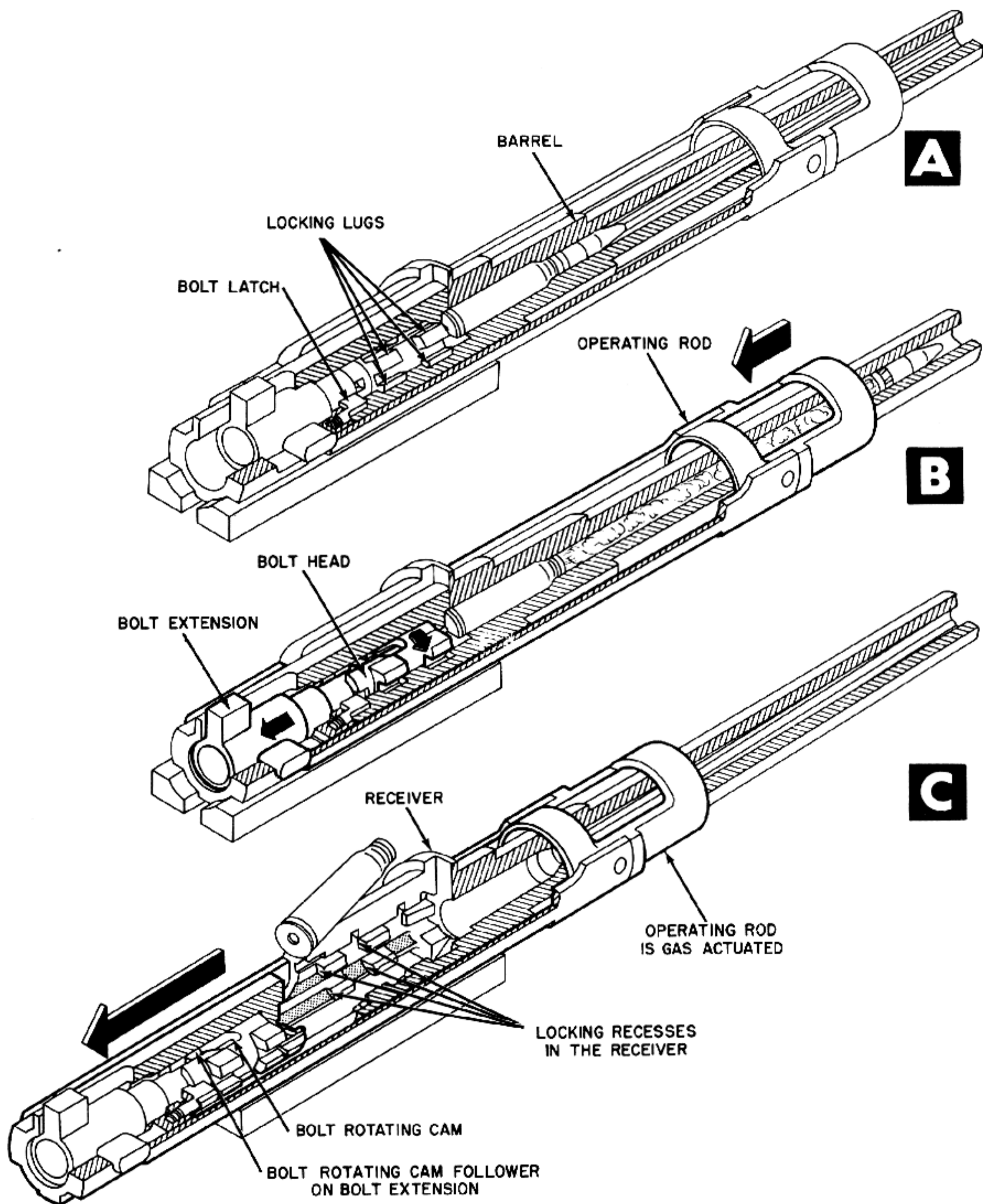


Figure 6-7. Rearward Motion of Bolt Extension Causes Cam To Unlock Bolt.



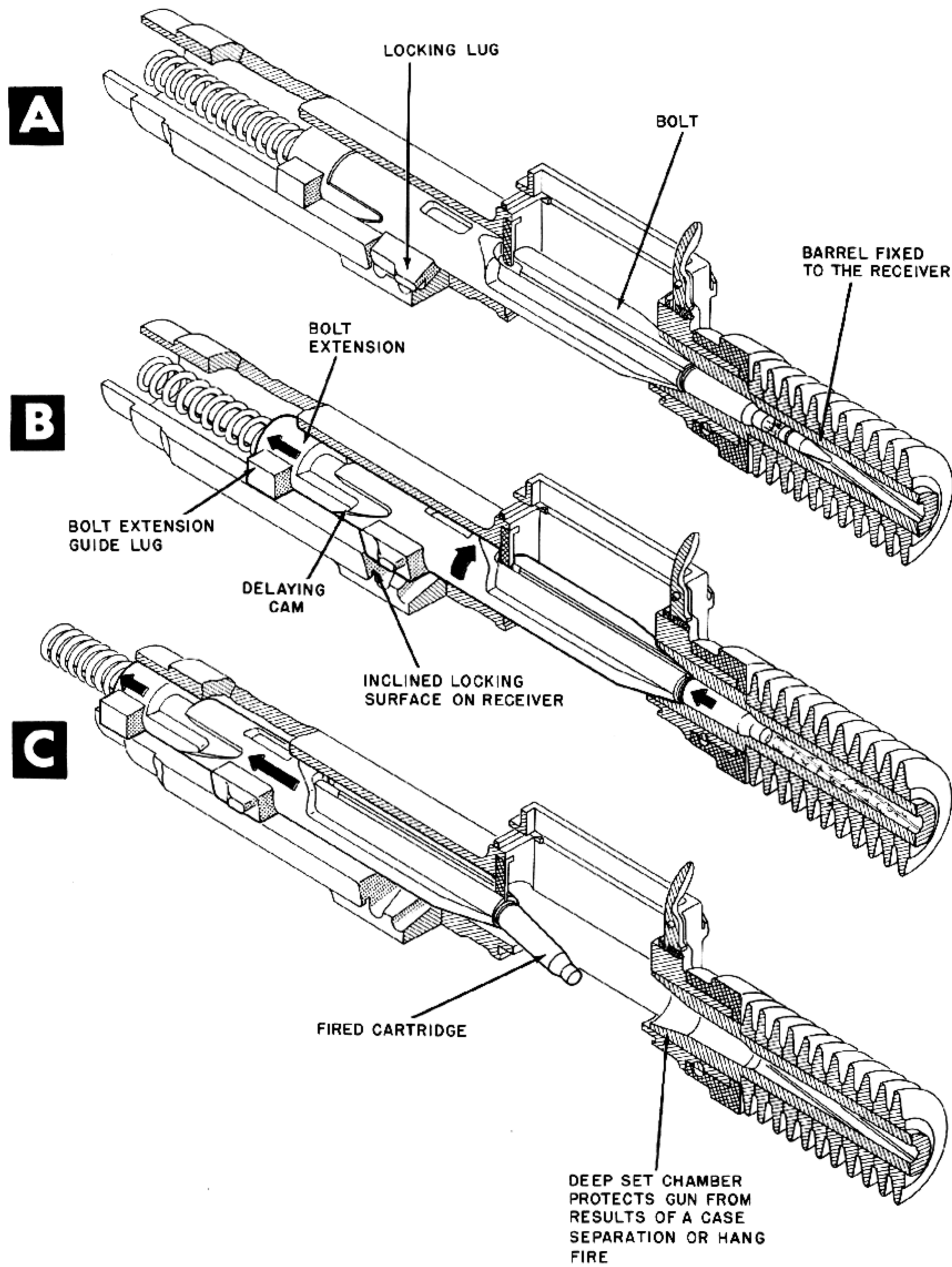


Figure 6-8. Bolt Is Not Locked; It Is Merely Delayed by Inclined Surfaces.



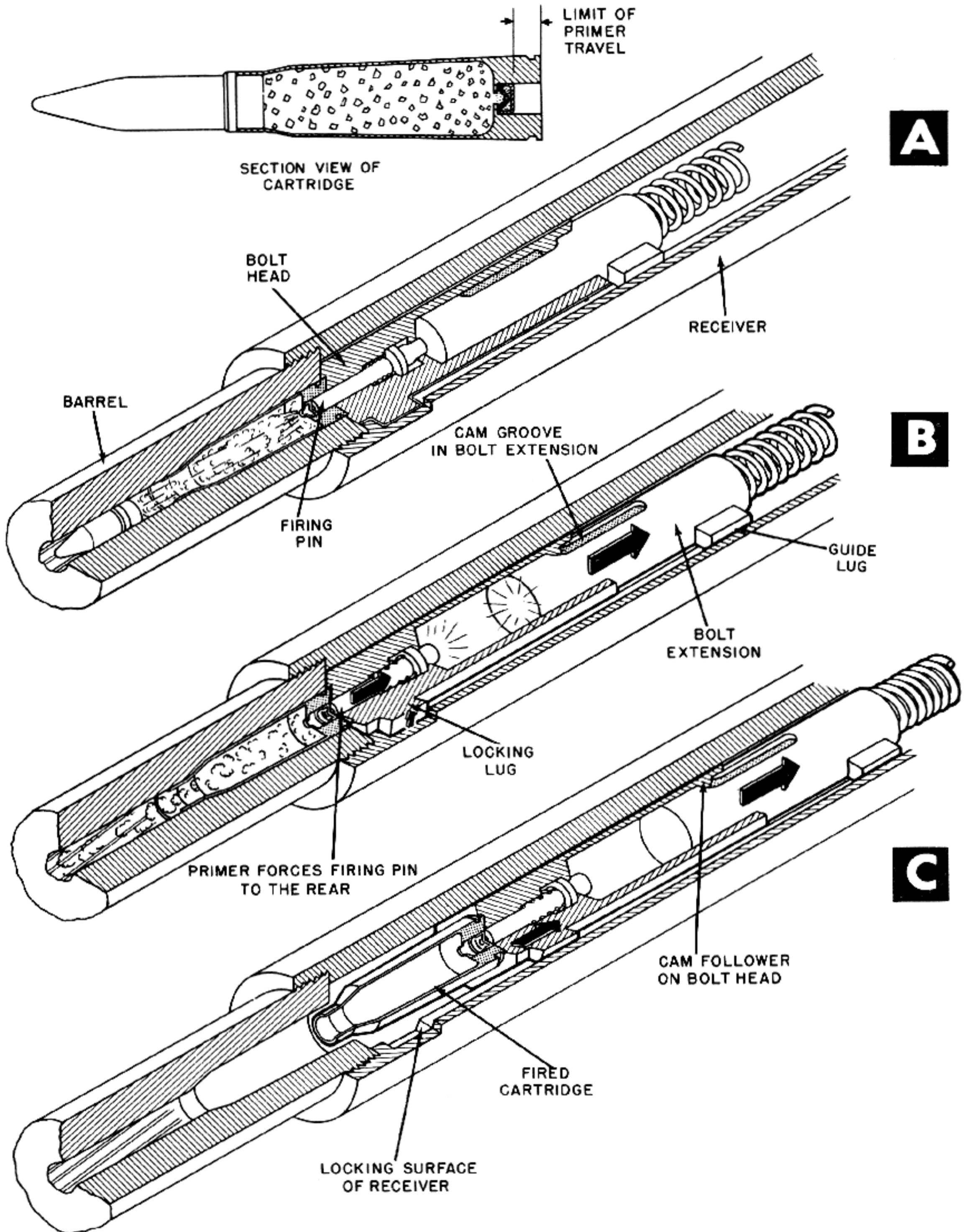


Figure 6-9. Action of Primer on Firing Pin Causes Bolt To Unlock.

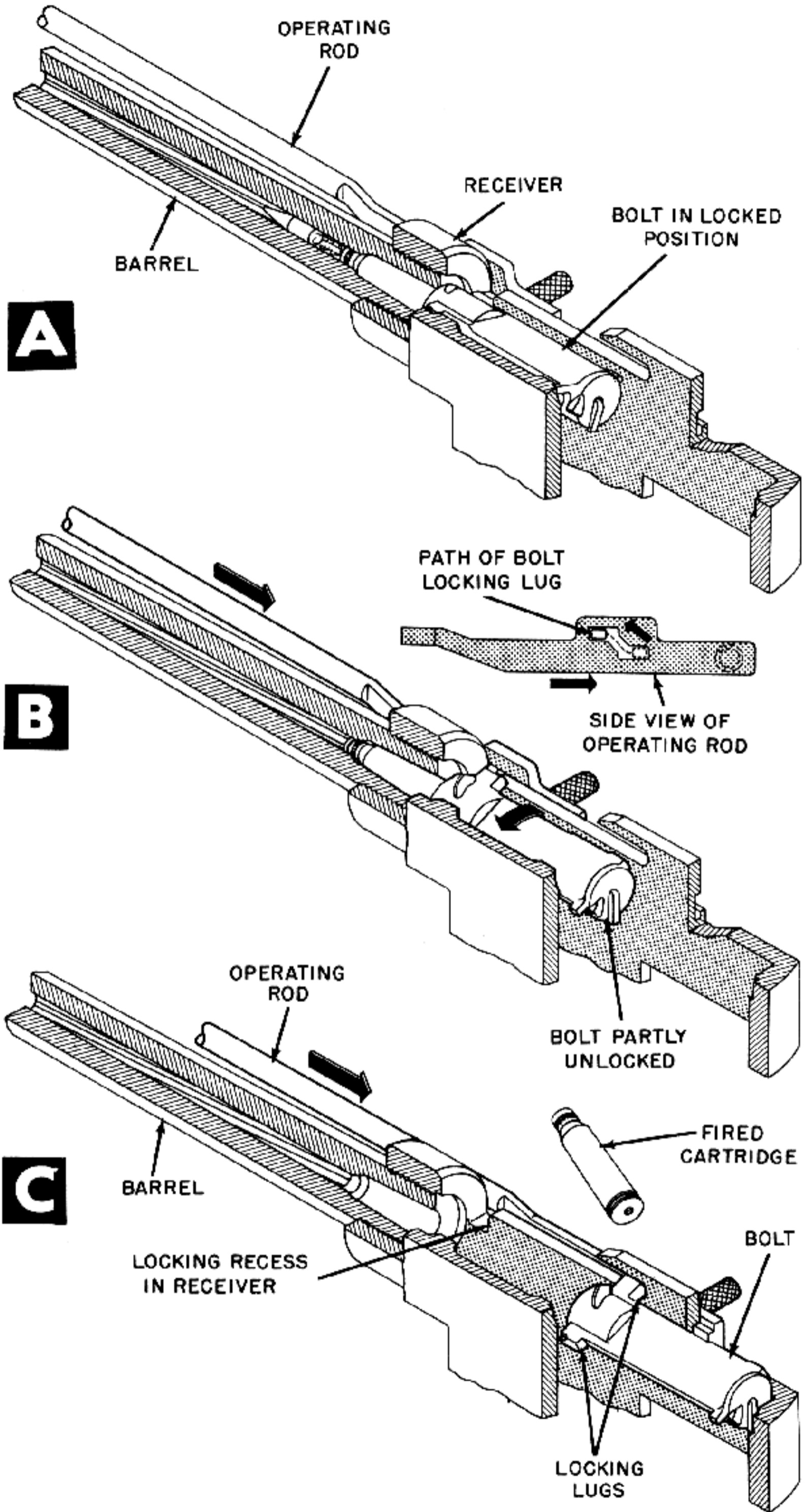


Figure 6-10. Cam on Operating Rod Unlocks Solid Bolt.

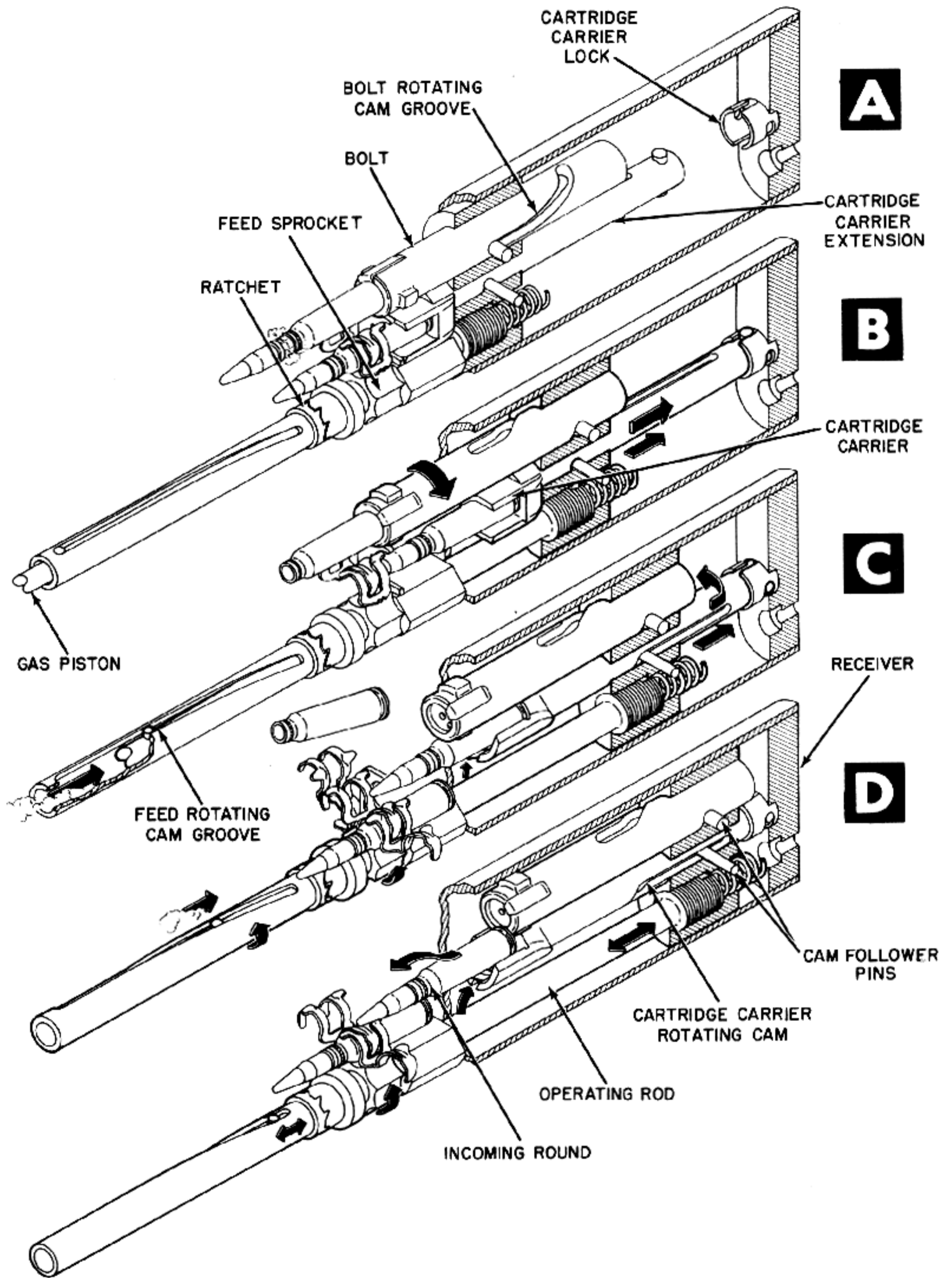


Figure 6-11. Solid Bolt Unlocked by Action of Operating Rod on Cam Groove in the Bolt.



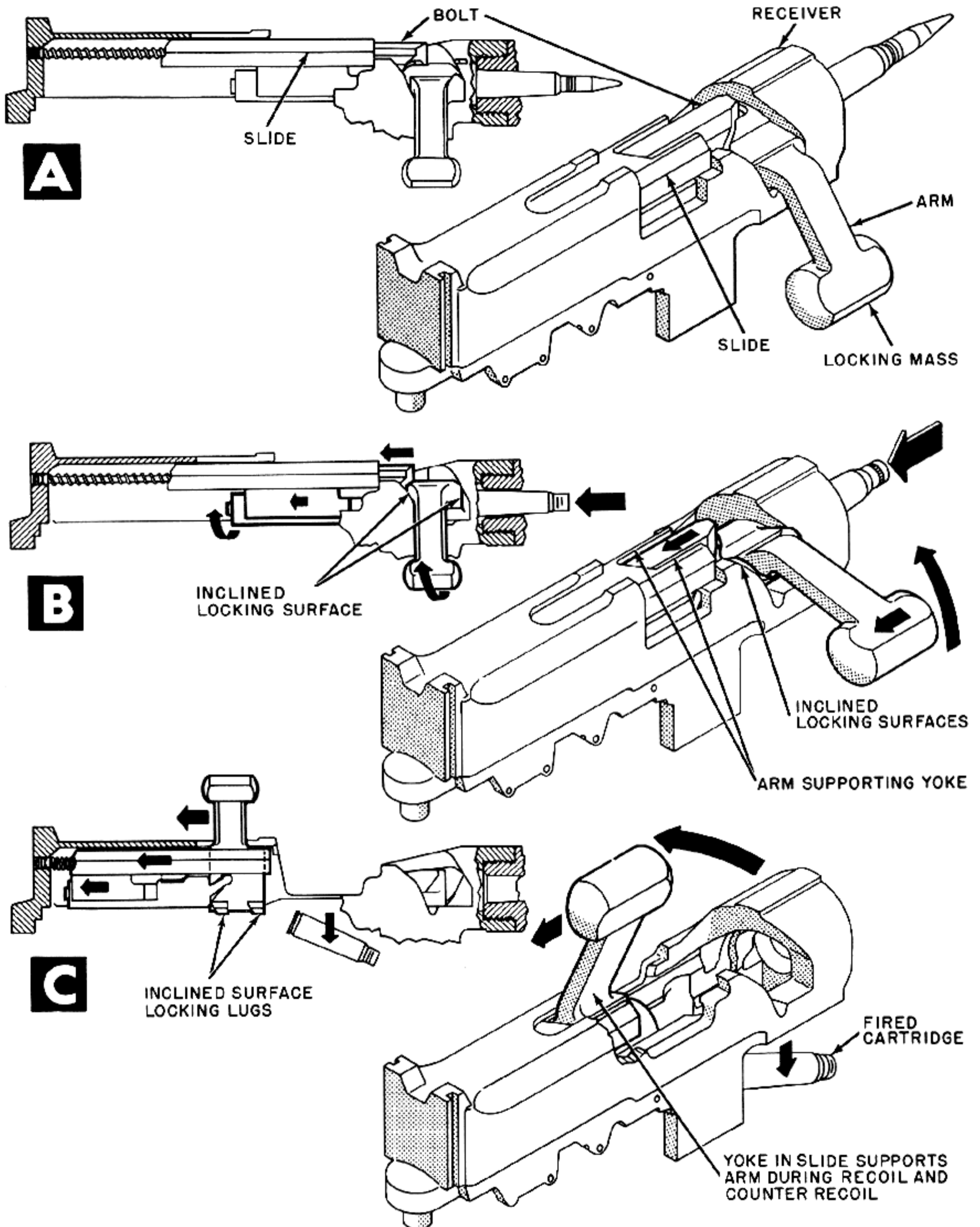


Figure 6-12. Gas Pressure on Inclined Surfaces Force Locking Mass and Bolt to Unlocked Position.



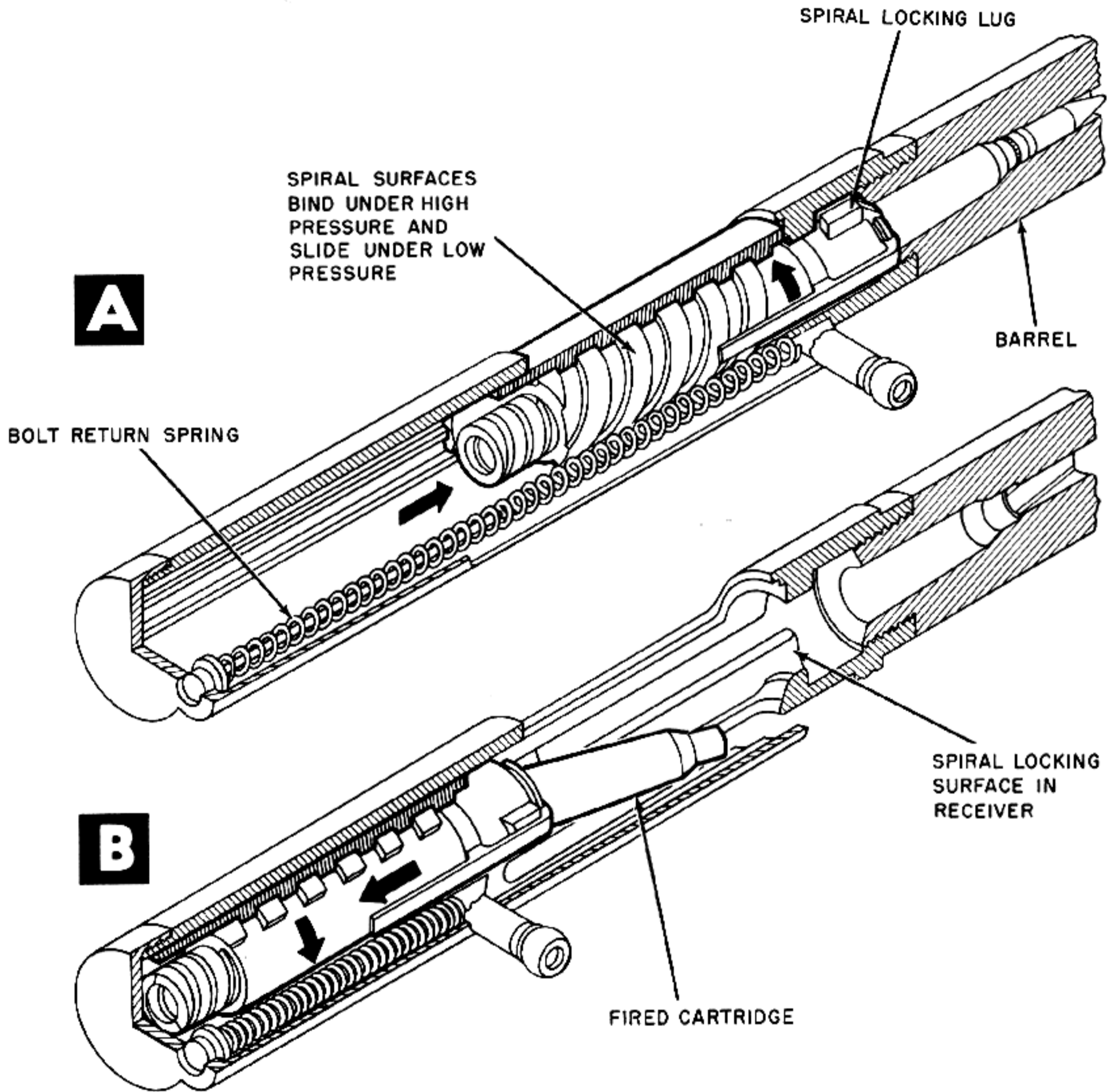


Figure 6-13. High Gas Pressure Causes Spirals To Bind. When Pressure Lowers, Spirals Slide, Unlocking the Bolt.

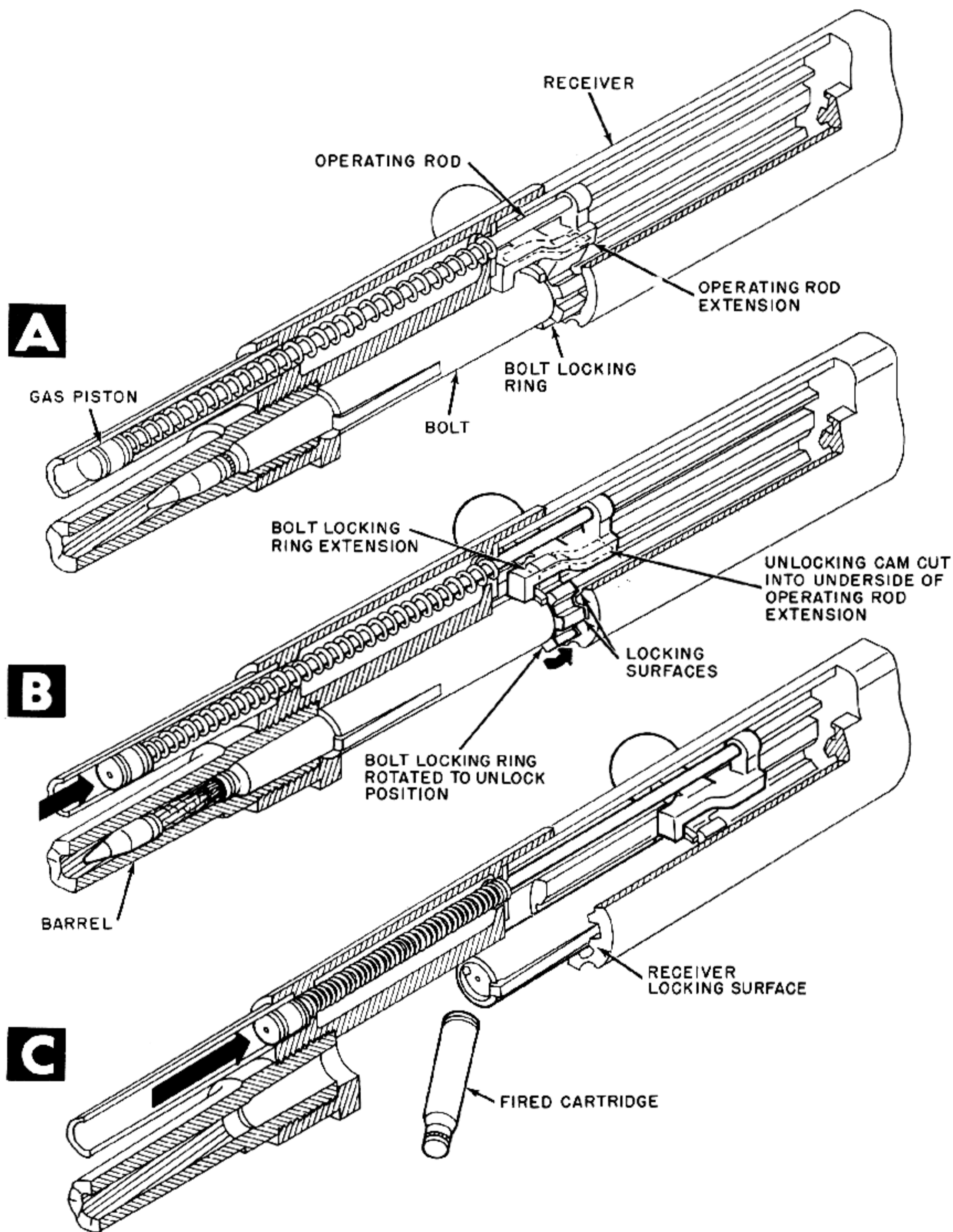


Figure 6-14. Cam on Operating Rod Rotates Bolt Locking Ring.

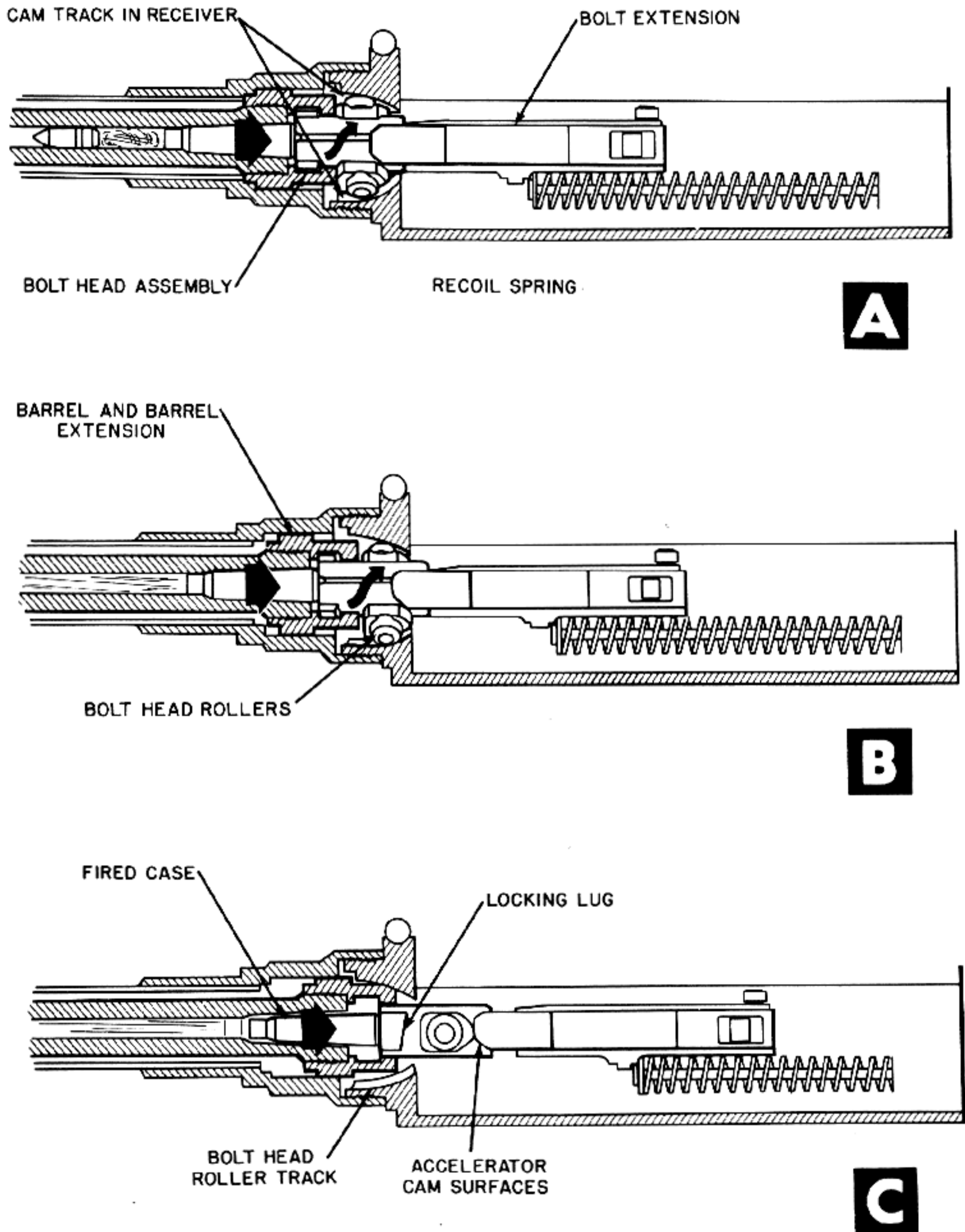


Figure 6-15. Cam Grooves on the Receiver Force Recoiling Bolt to Rotate to Unlock Position.

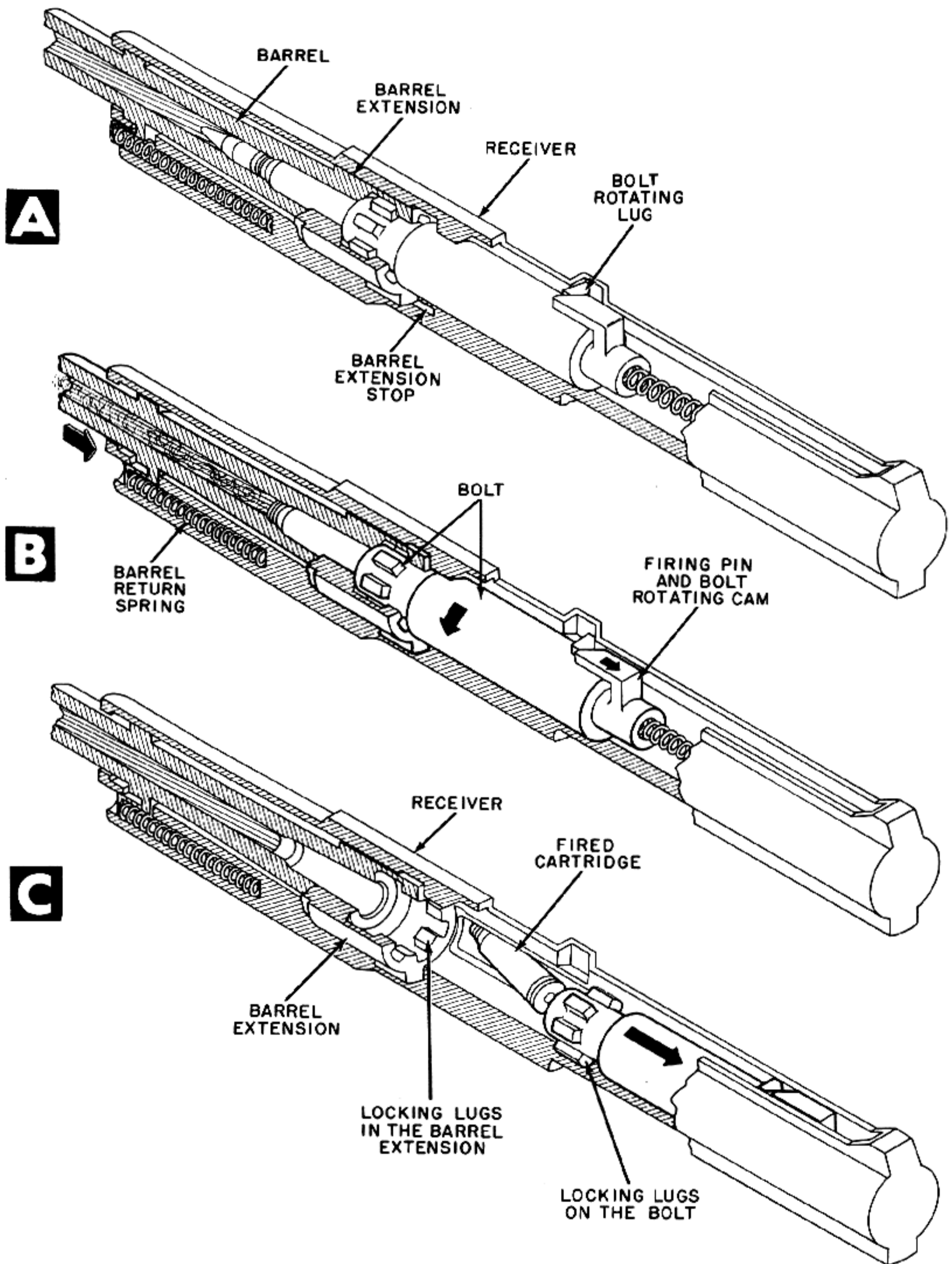


Figure 6-16. Cam Grooves in Receiver Cause Recoiling Bolt Extension To Unlock Bolt.



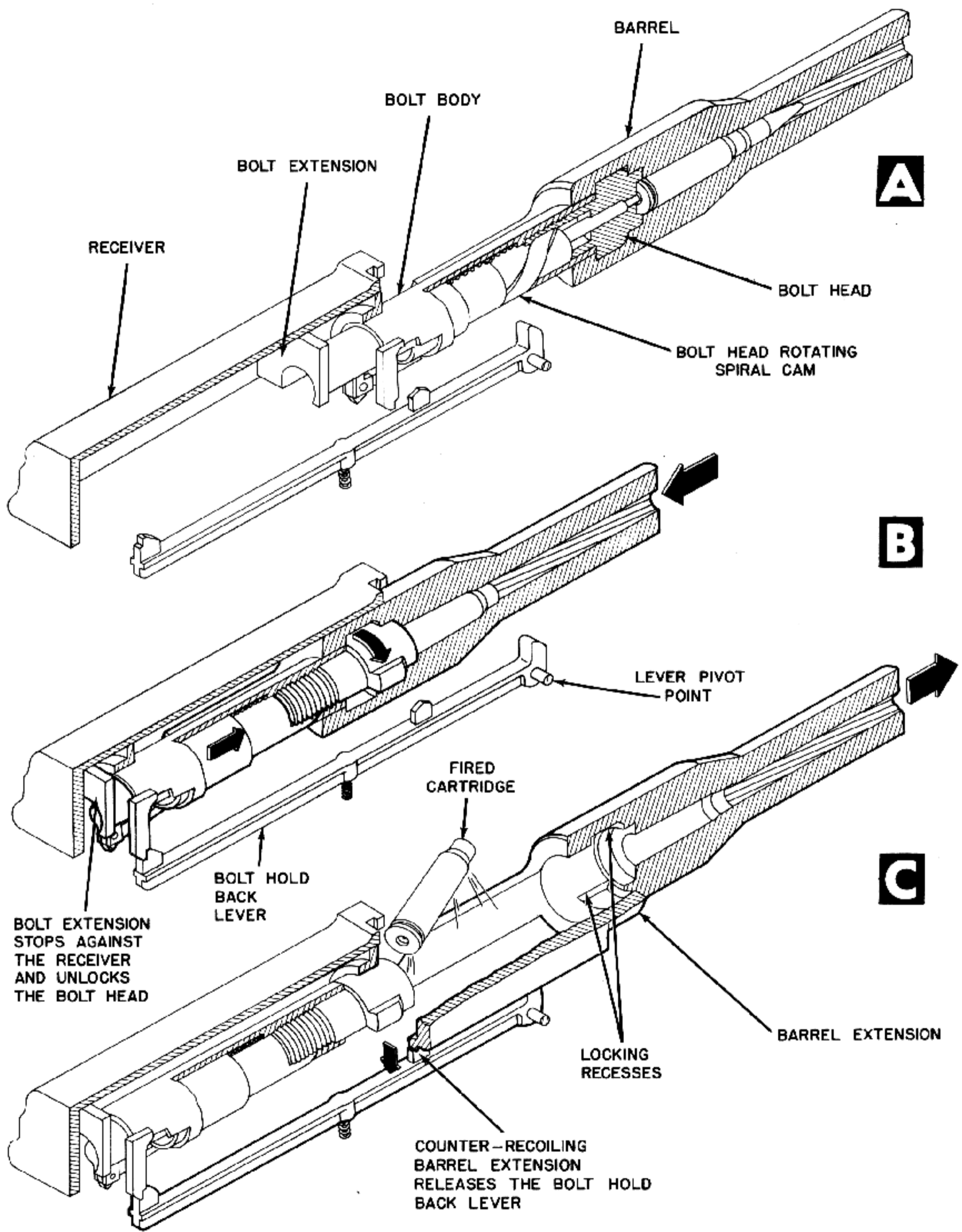
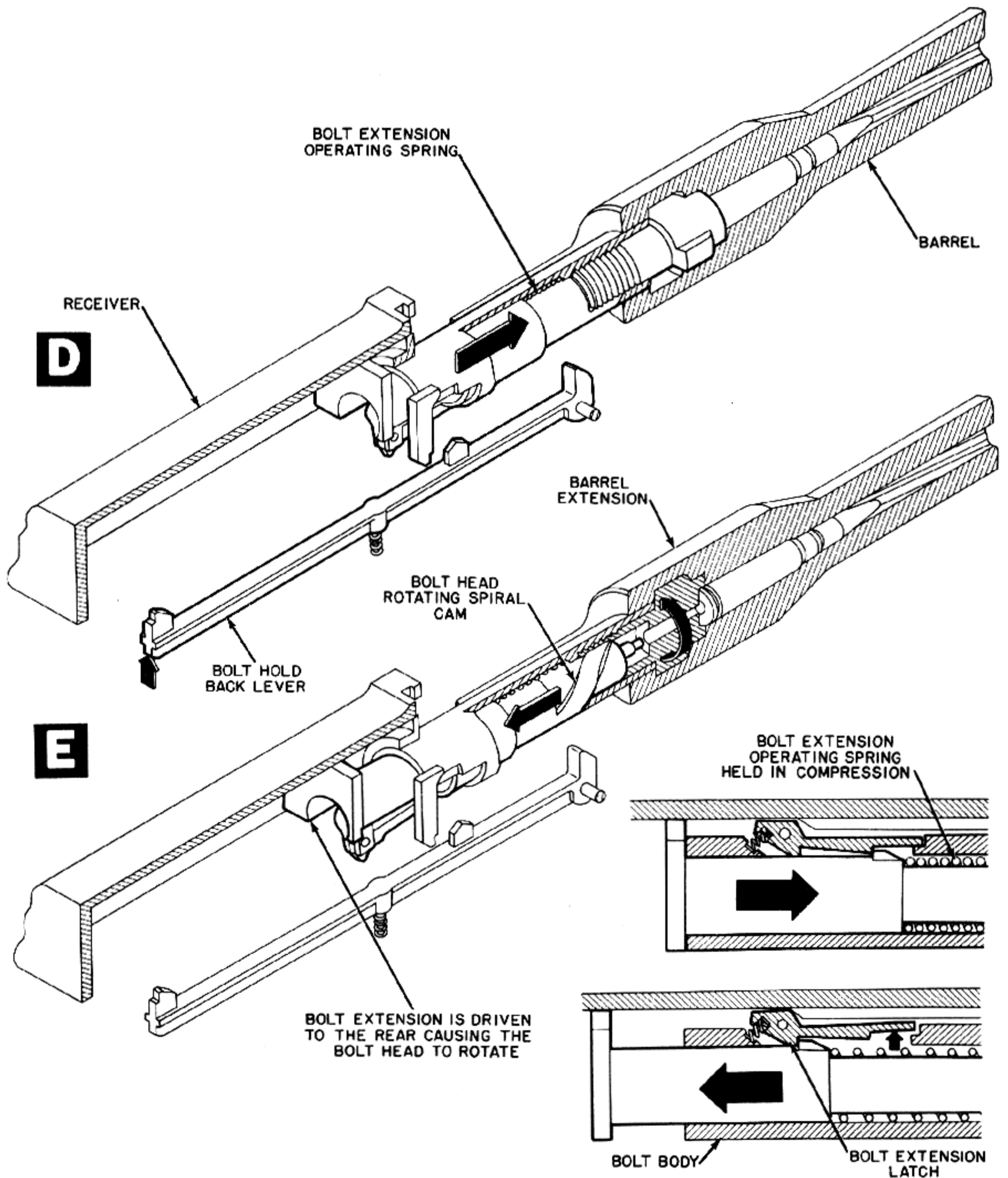


Figure 6-17. Bolt Is Unlocked by Action of



Counter-Recoiling Barrel Extension.

B. Sleeve

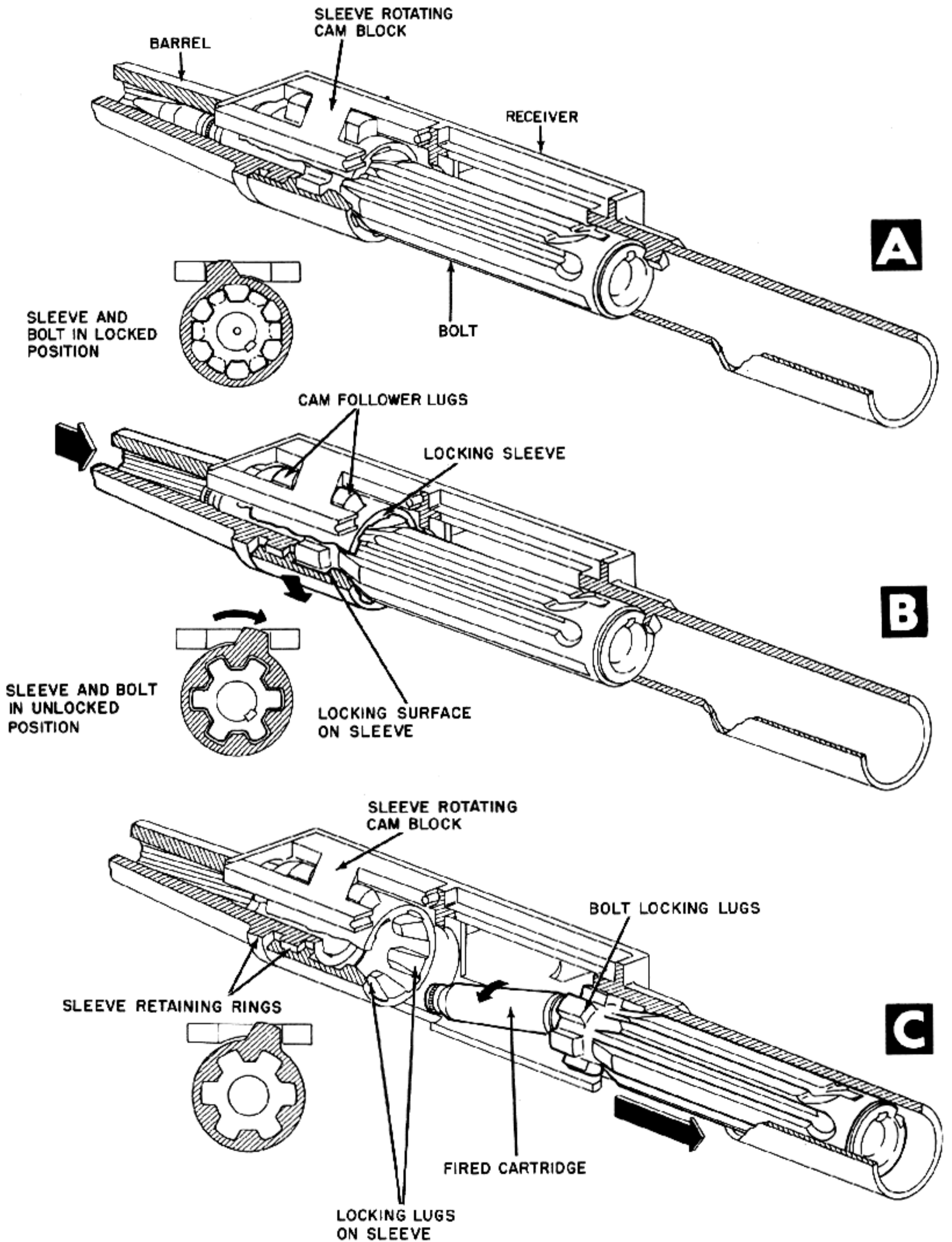
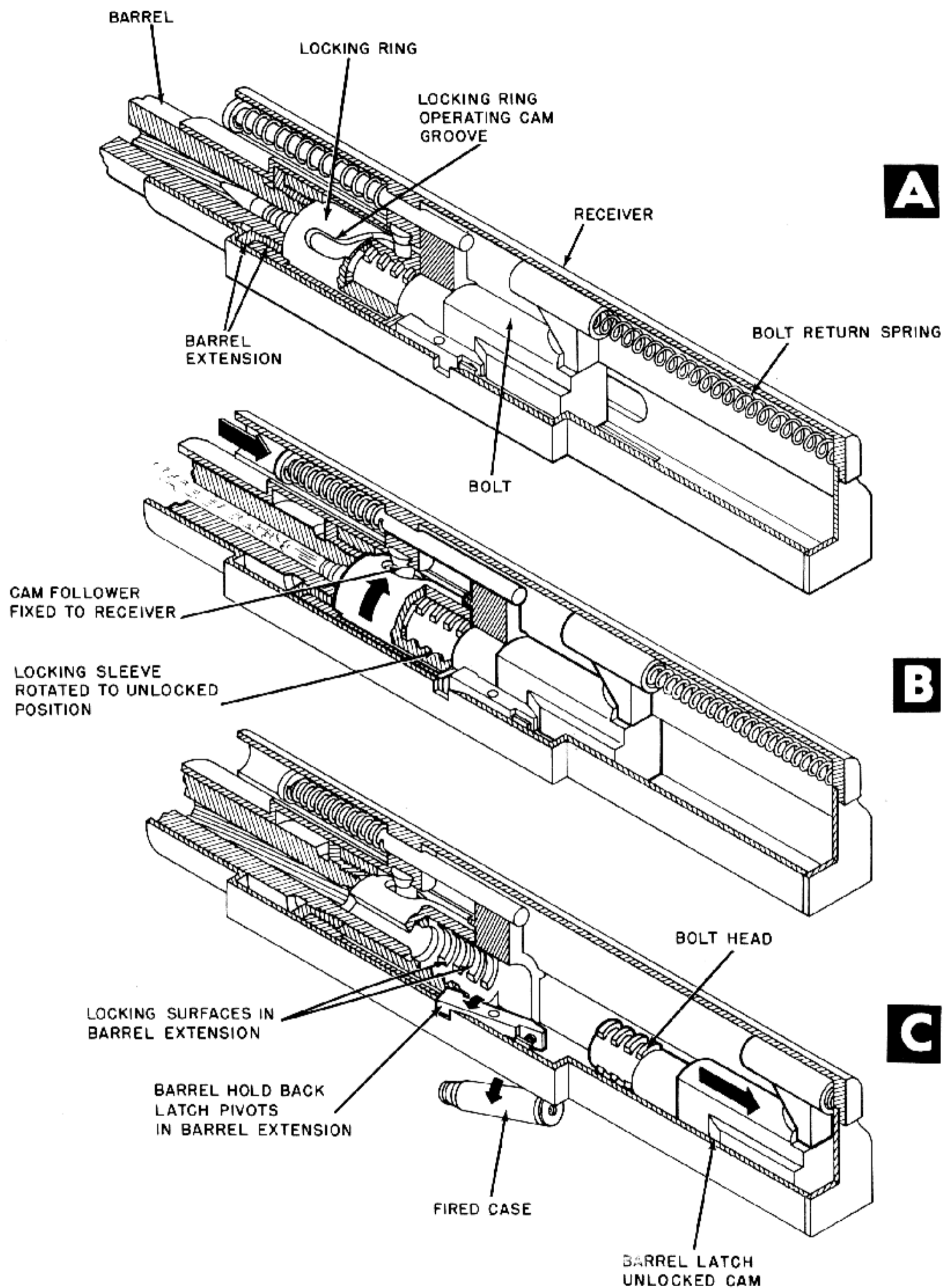


Figure 6-18. Bolt Is Unlocked by Rotation of Locking Sleeve.



**A**

**B**

**C**

Figure 6-19. Cam Follower in Receiver Causes Recoiling Locking Sleeve To Rotate, Unlocking the Bolt.



# THE MACHINE GUN

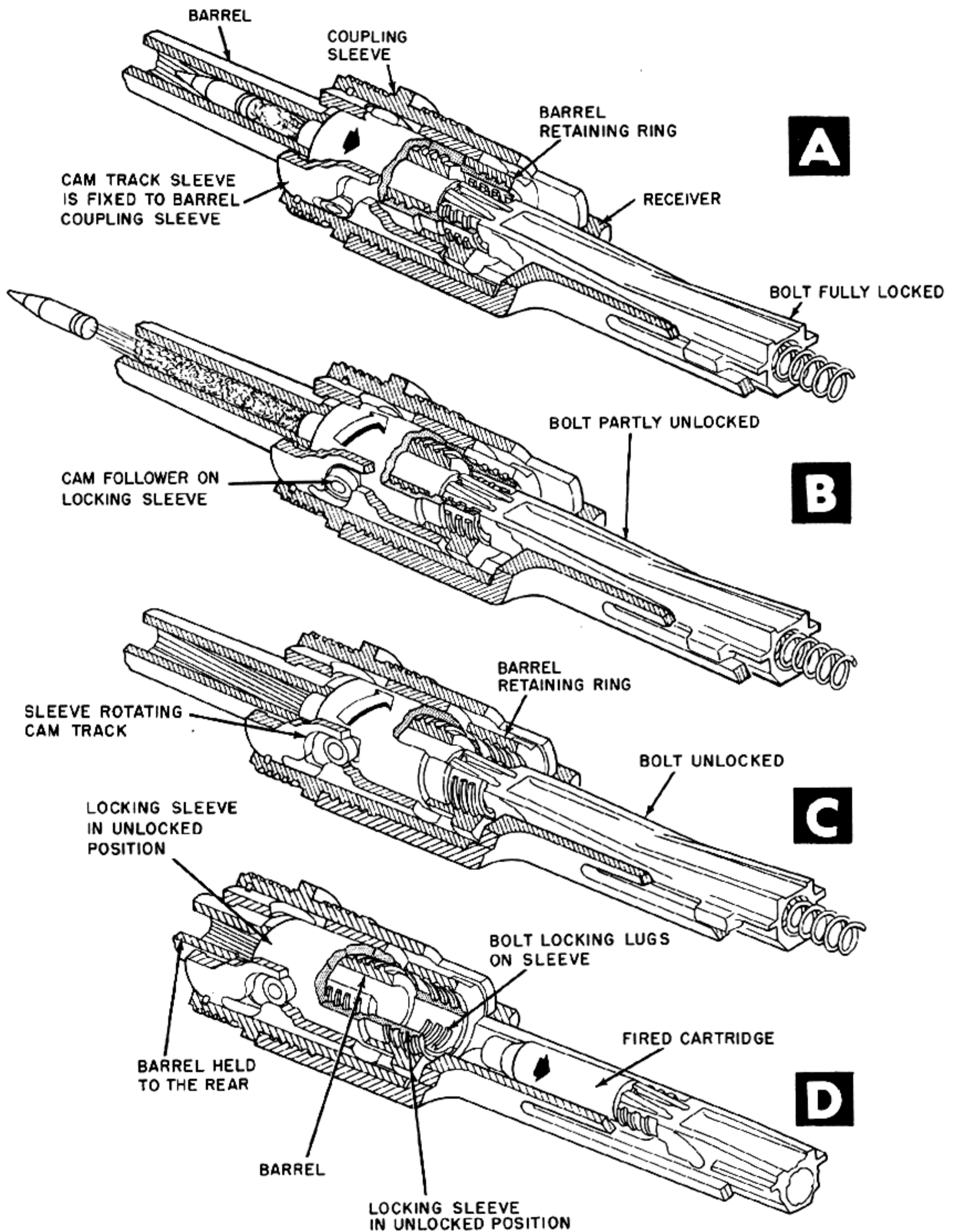


Figure 6-20. Cam Groove in Receiver Causes Locking Sleeve To Rotate, Unlocking the Bolt.

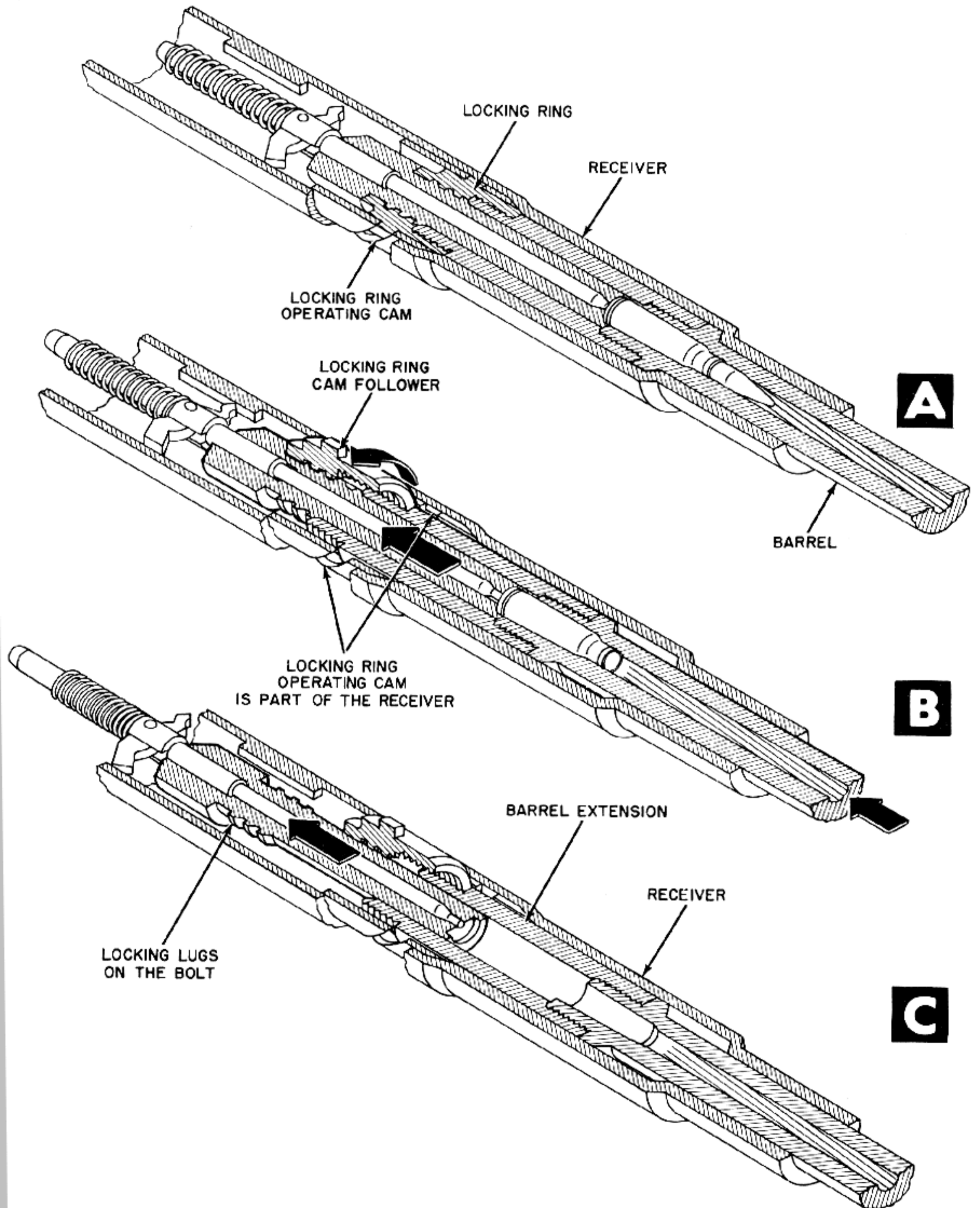


Figure 6-21. Cam Groove in Receiver Causes Locking Sleeve To Rotate, Unlocking the Bolt.

C. Toggle

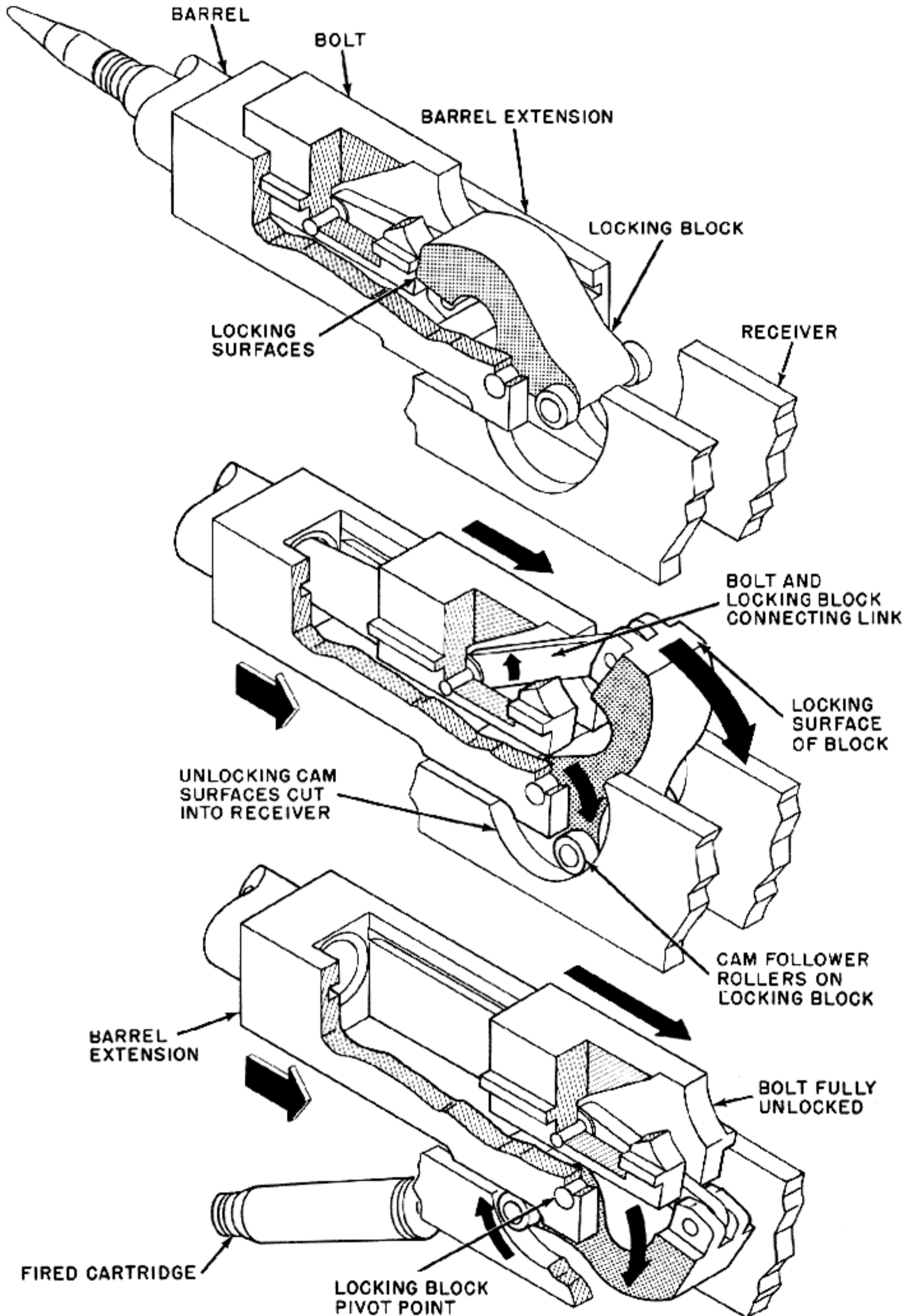


Figure 6-22. Bolt Is Unlocked by Action of Cam Followers on the Locking Block Recoiling Against Cams in the Receiver.



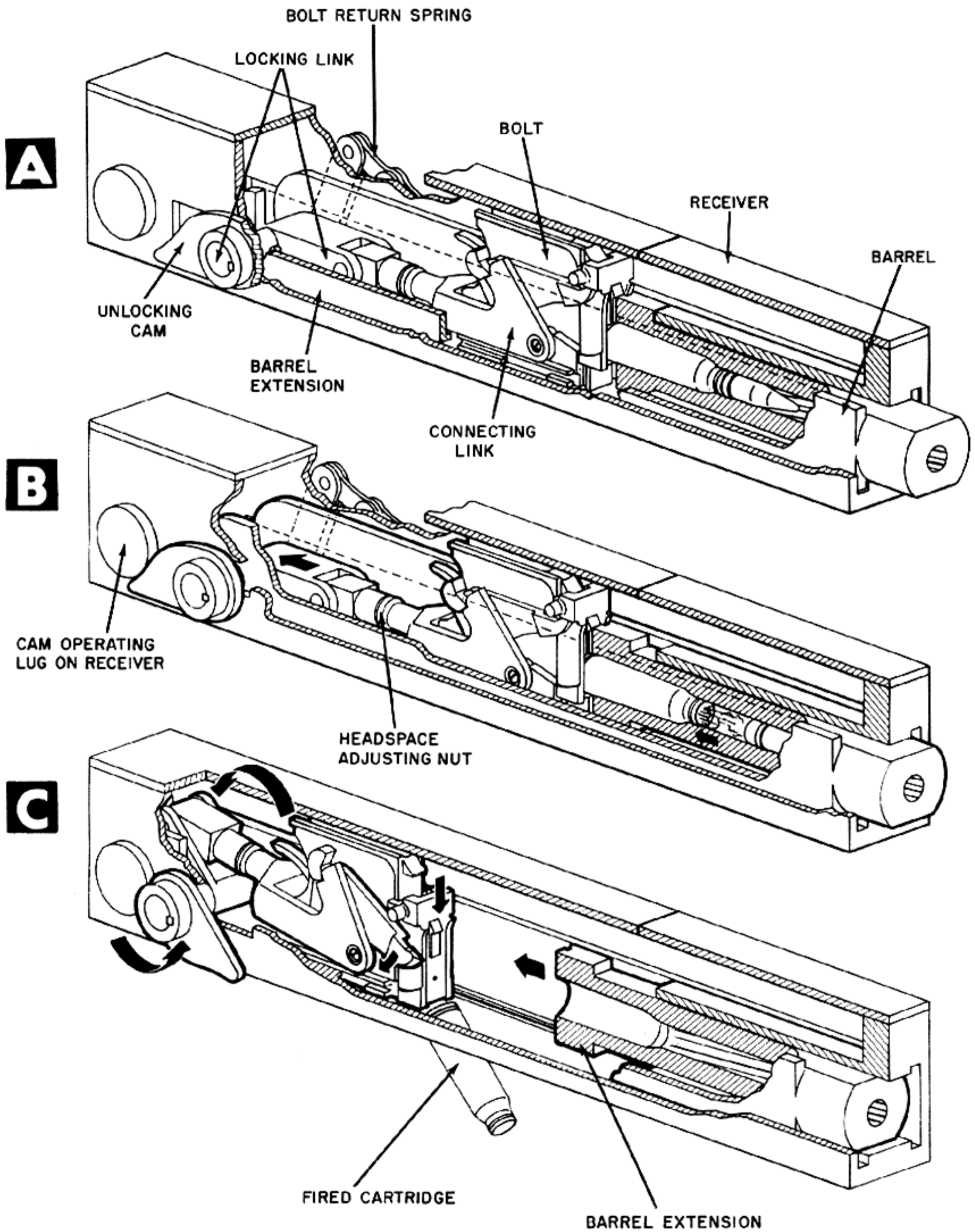


Figure 6-23. Bolt Is Unlocked by the Action of the Unlocking Cam on a Lug on the Receiver.



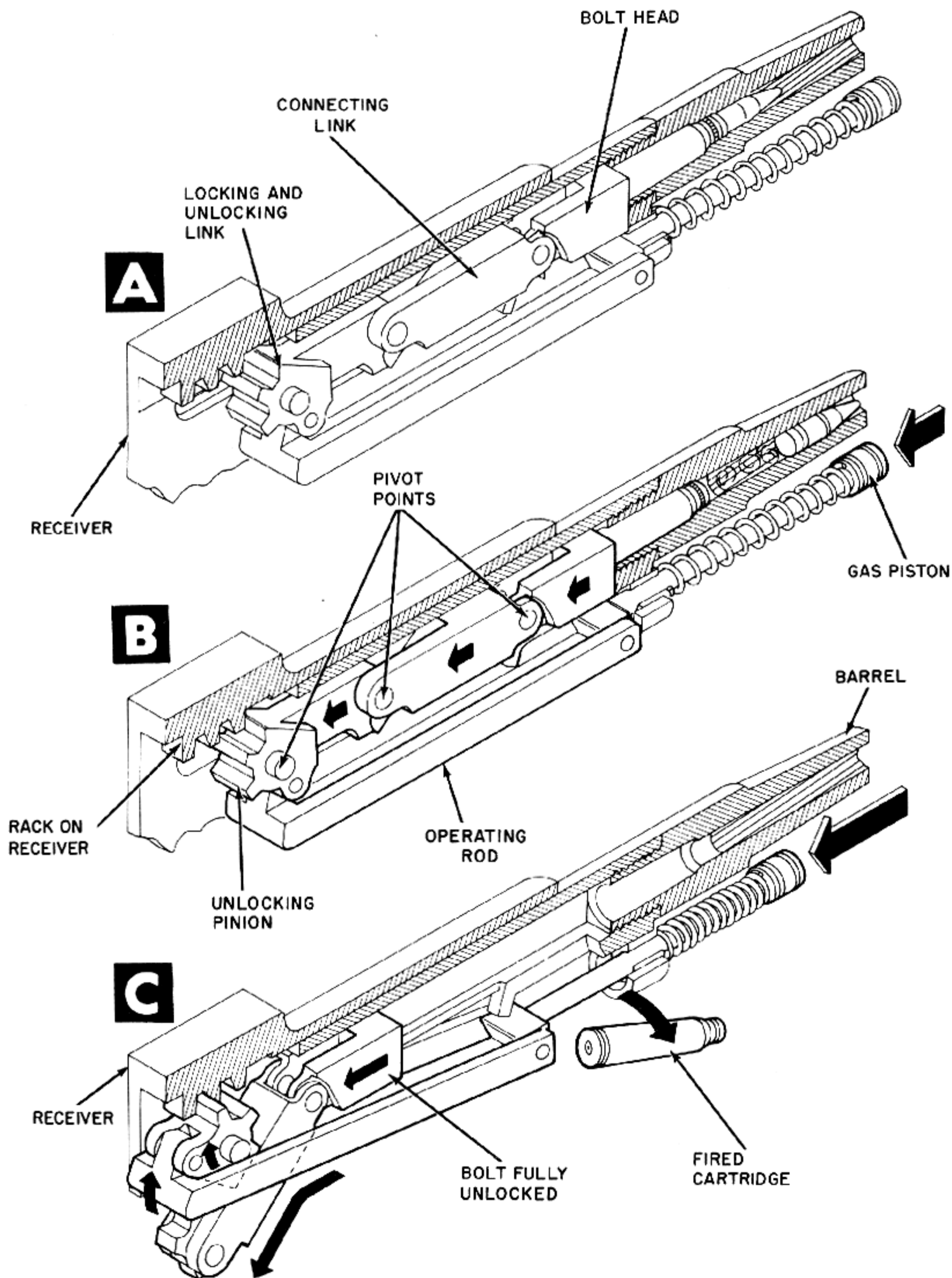


Figure 6-24. Bolt Is Unlocked When Operating Rod Rotates Unlocking Pinion.

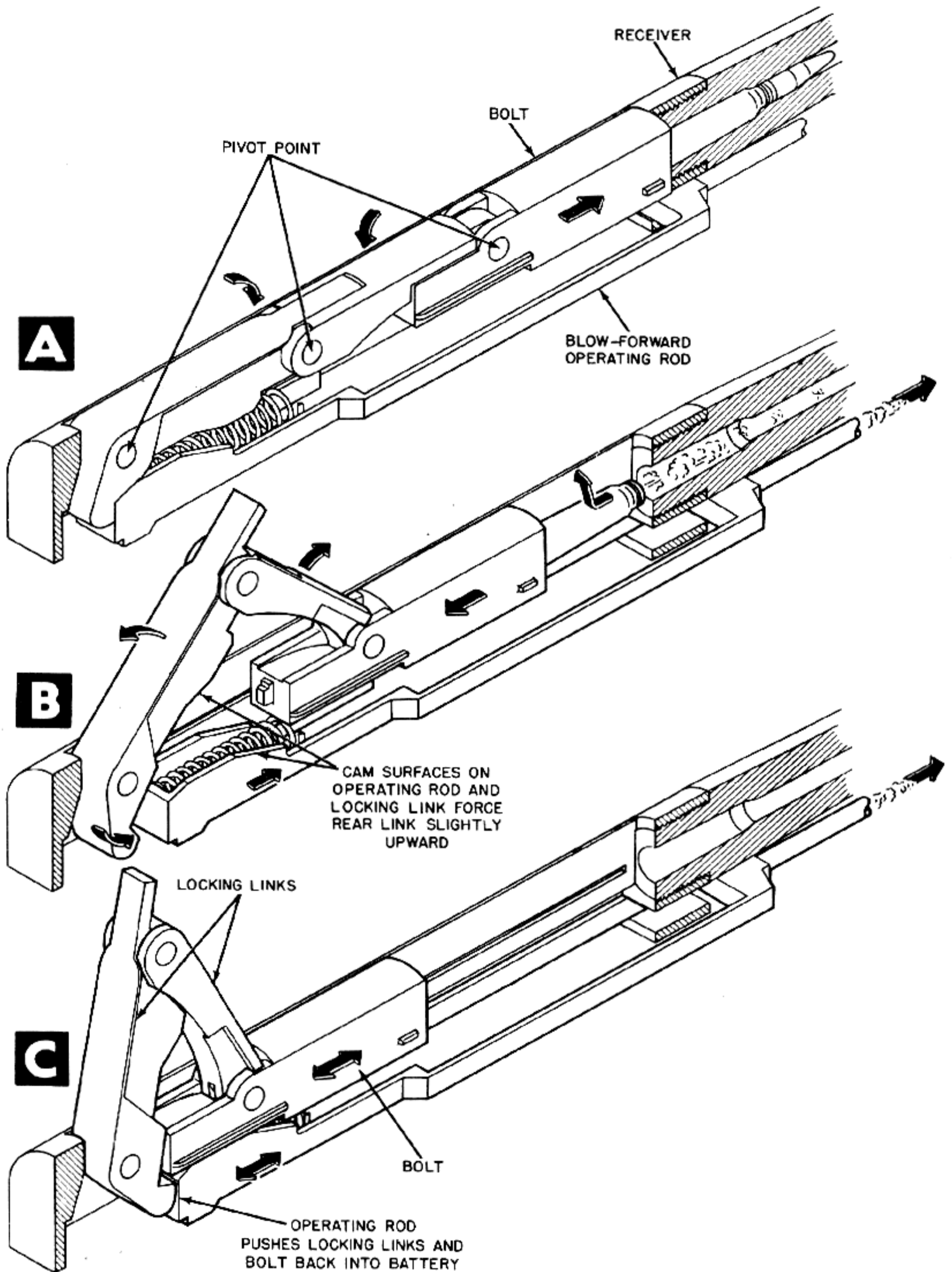


Figure 6-25. Bolt Is Unlocked When Operating Rod Is Blown Forward Leaving the Locking Link Unsupported.

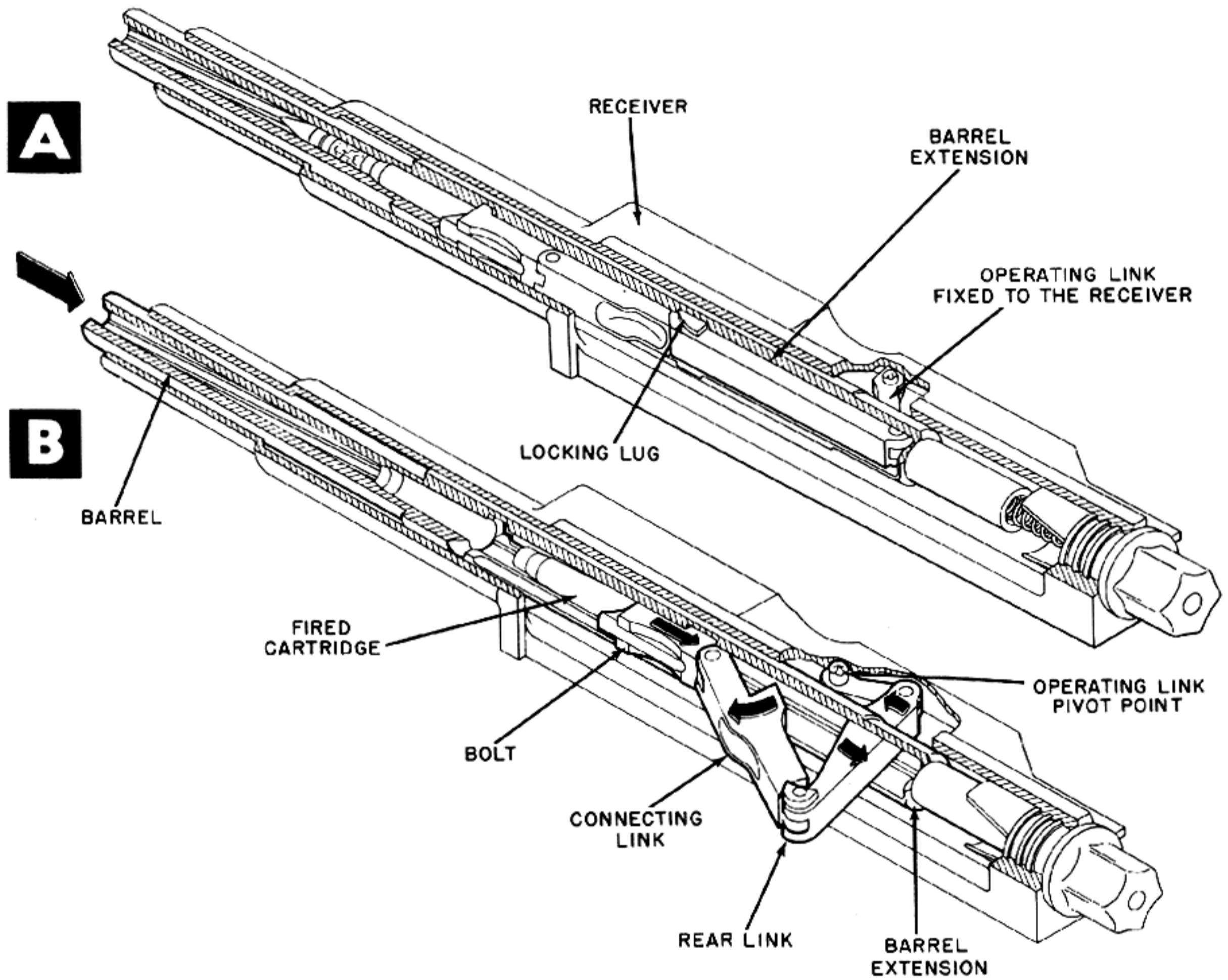


Figure 6-26. Action of the Fixed Link on End of Recoiling Bolt Causes It To Unlock.

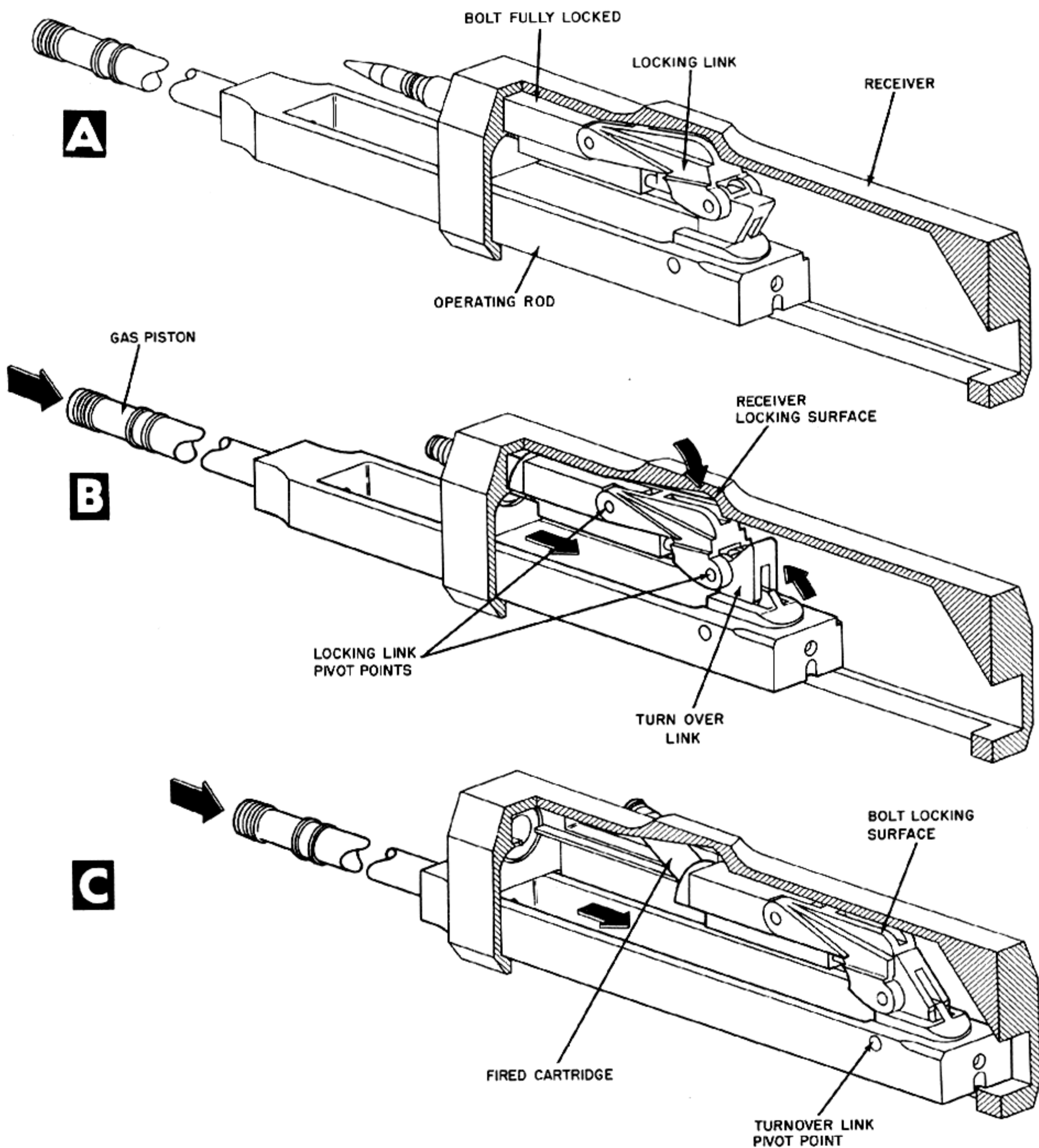


Figure 6-27. Operating Rod Pulls the Turn Over Link Out From Under the Locking Block, Unlocking the Bolt.



D. Propped Breech

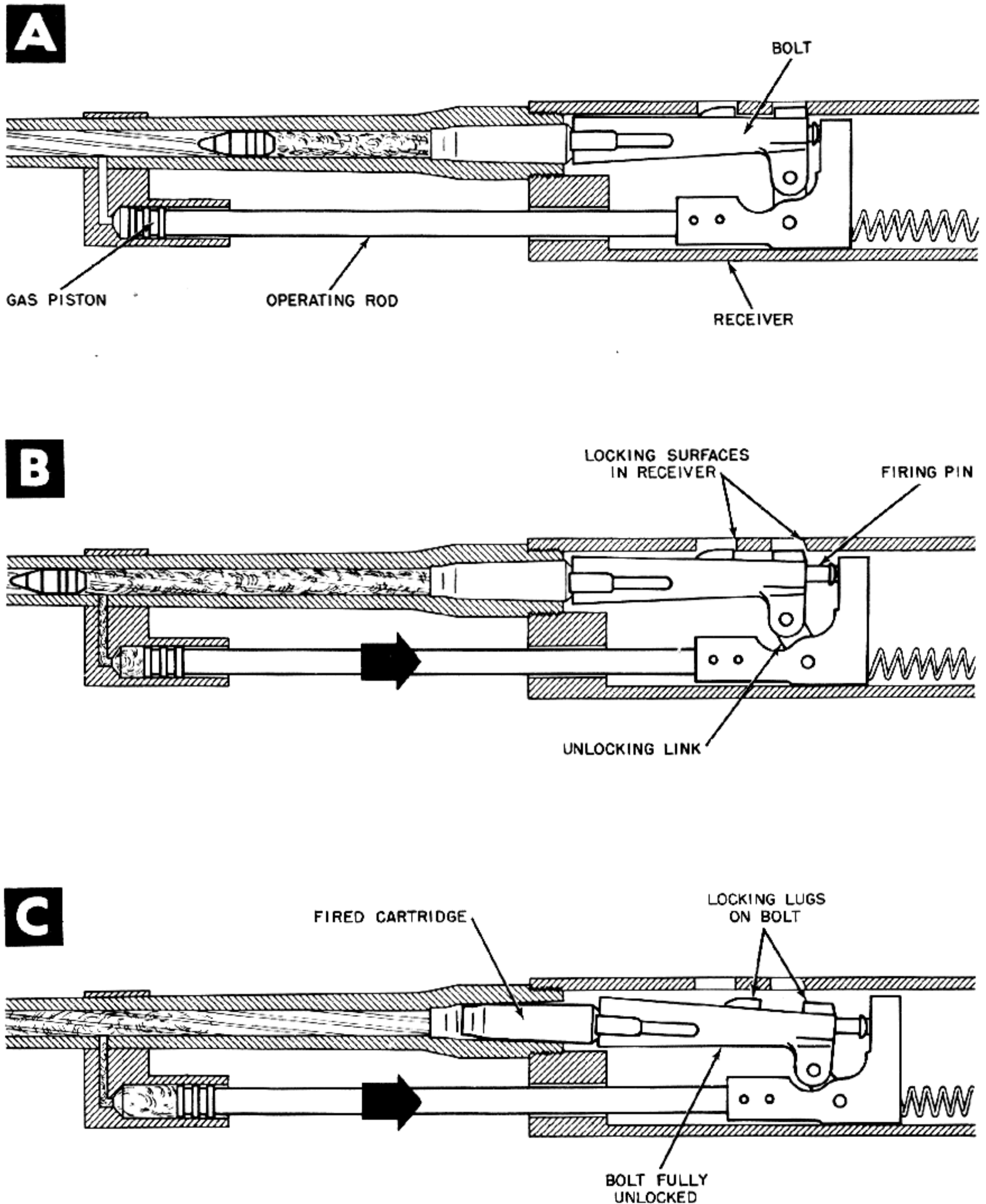


Figure 6-28. Recoiling Locking Link Pulls Bolt Free of Locking Surfaces in Receiver.

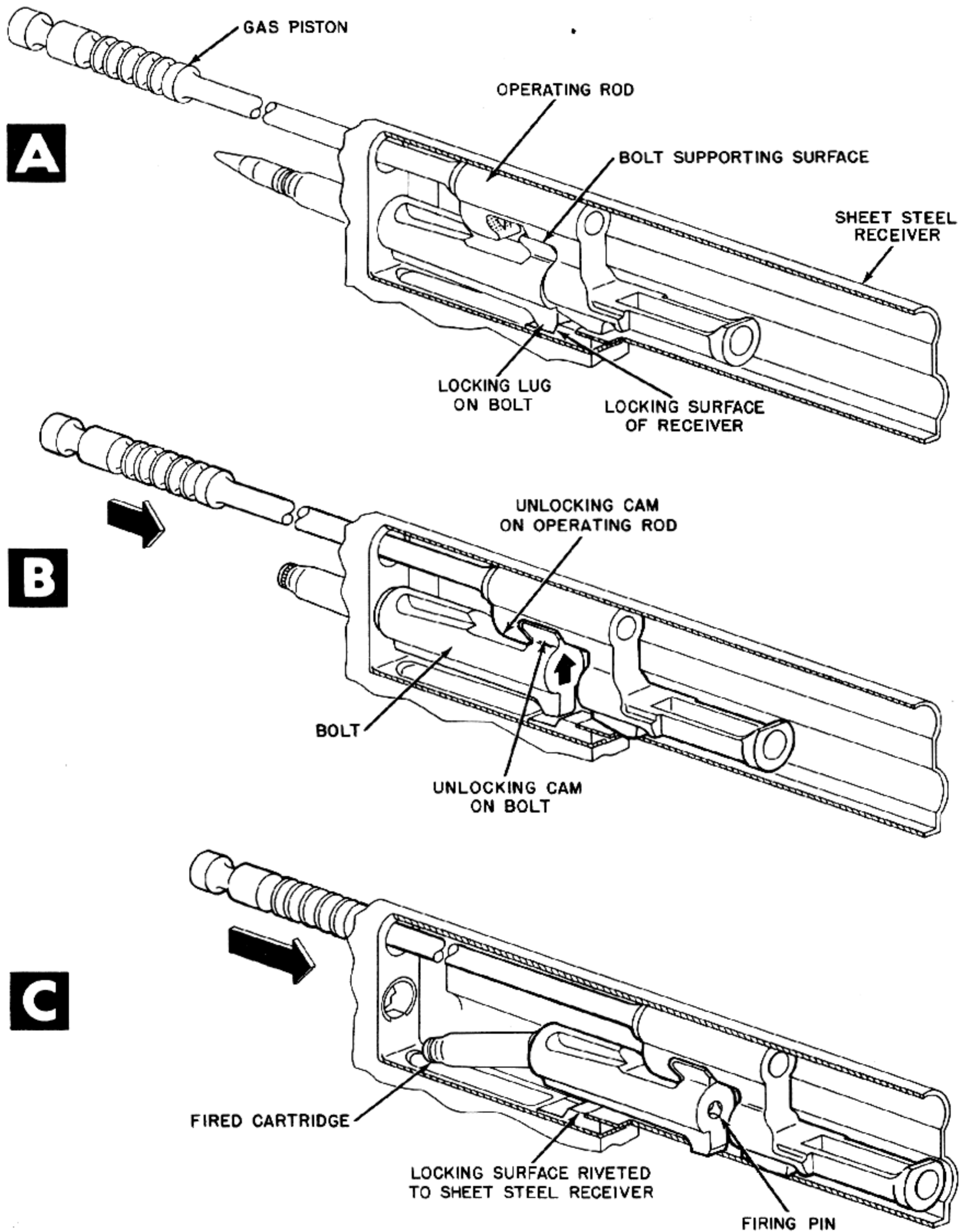


Figure 6-29. Cam Lug on Operating Rod Lifts Bolt Free of Locking Surface.

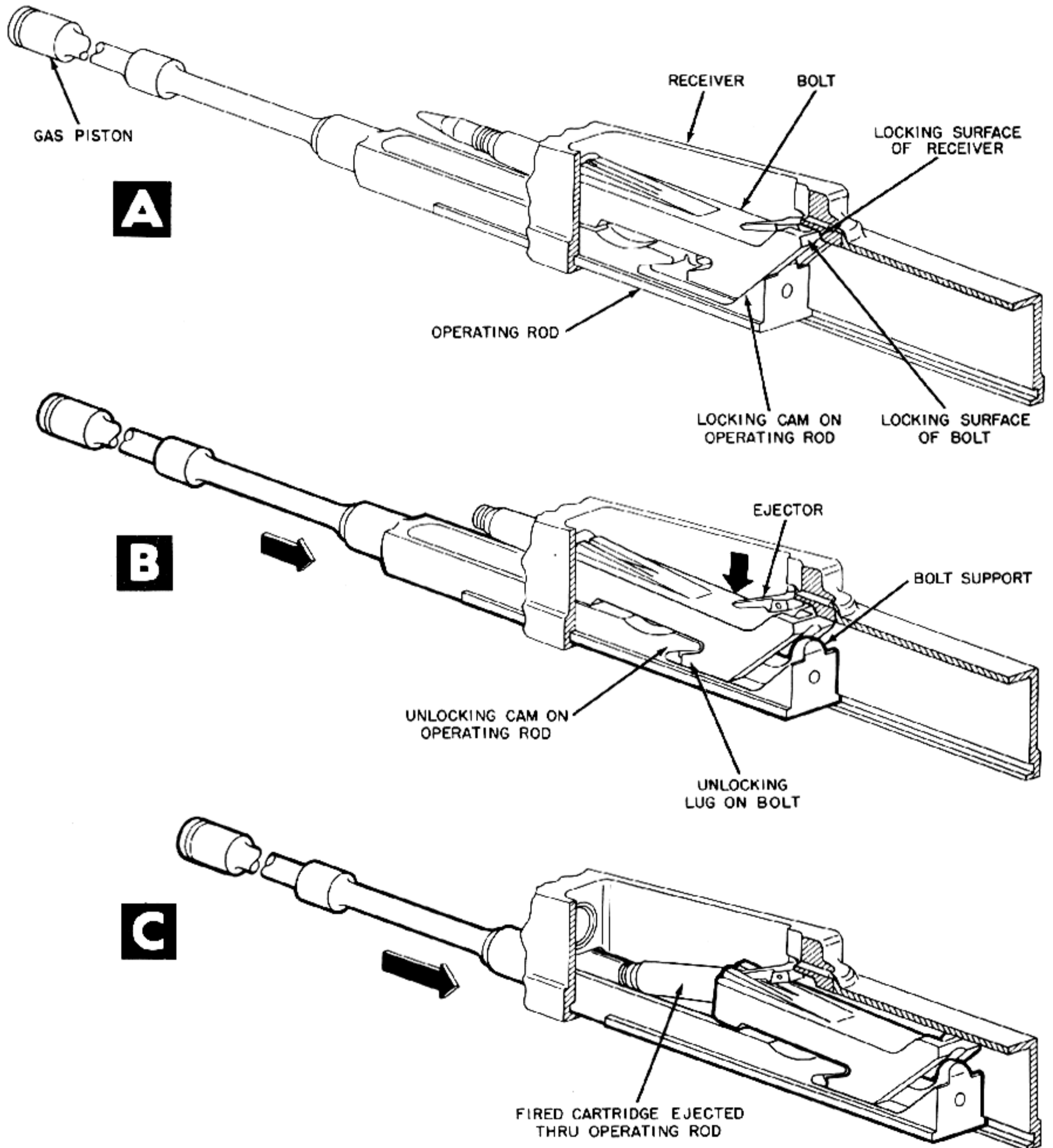


Figure 6-30. Cam on Operating Rod Pulls Bolt Free of Locking Surface After Withdrawing Bolt Support.

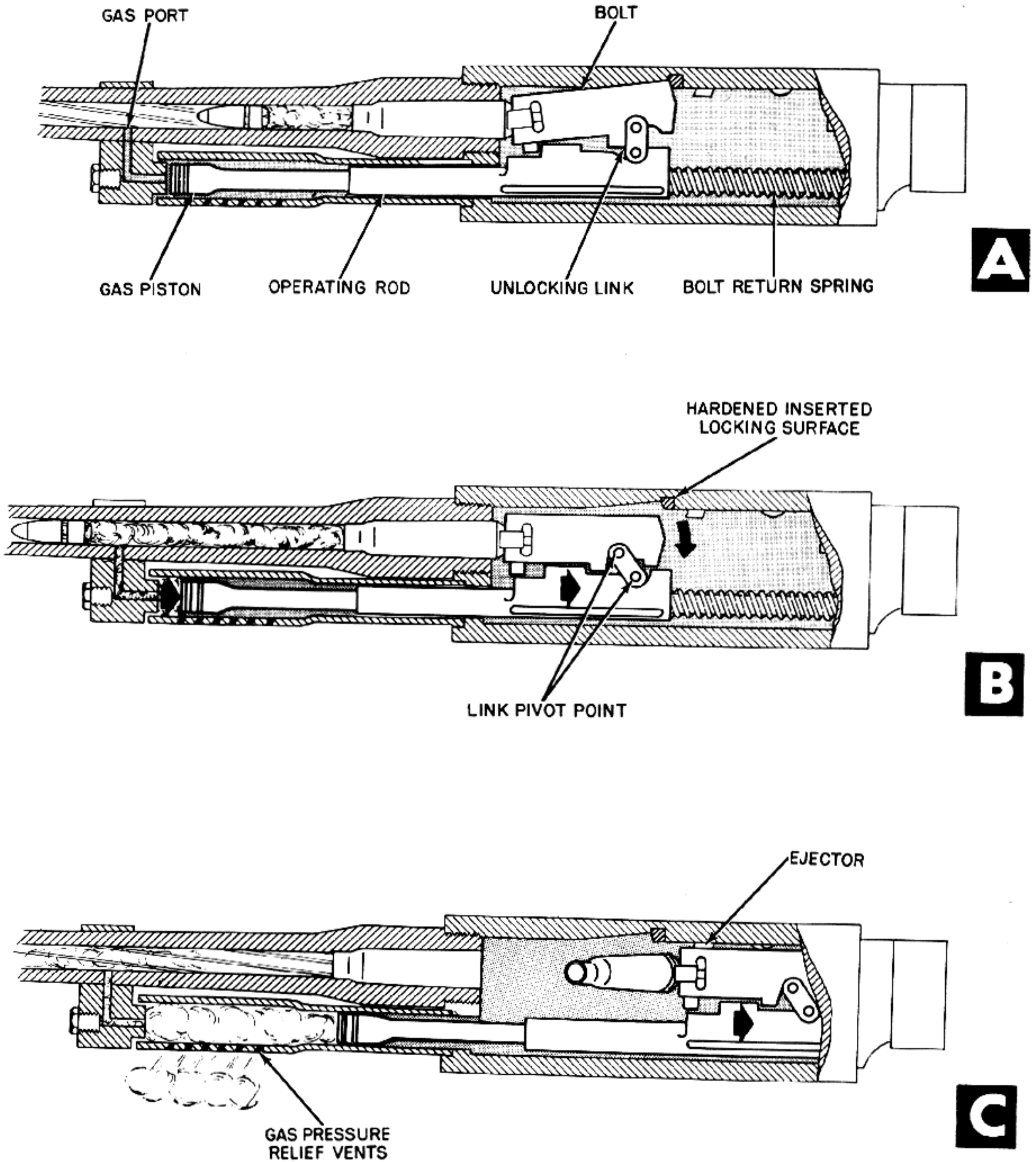


Figure 6-31. Recoiling Link Pulls Bolt Free of Locking Surface.



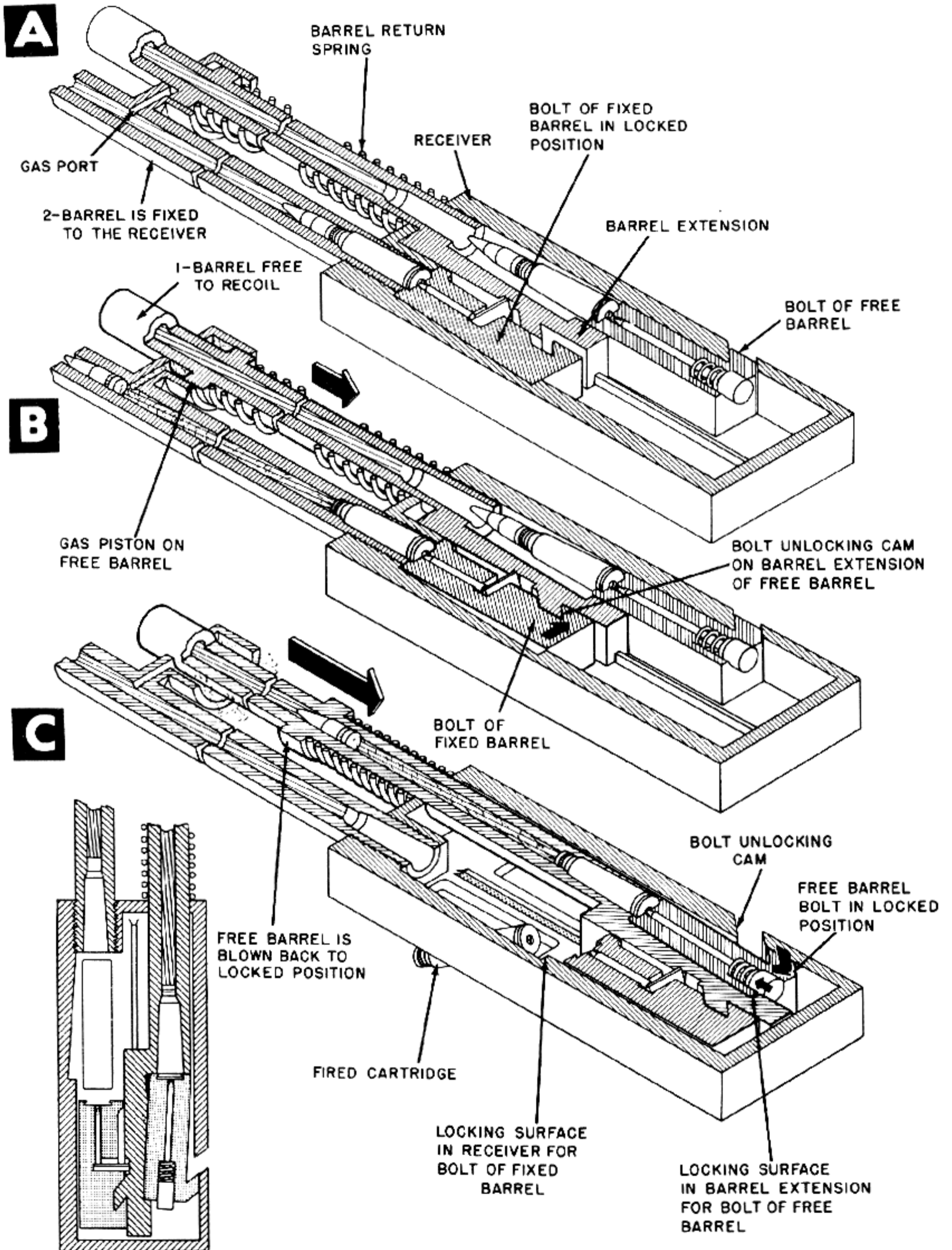


Figure 6-32. Double Barrel Gun Unlocked by Gas and Recoil Operation.

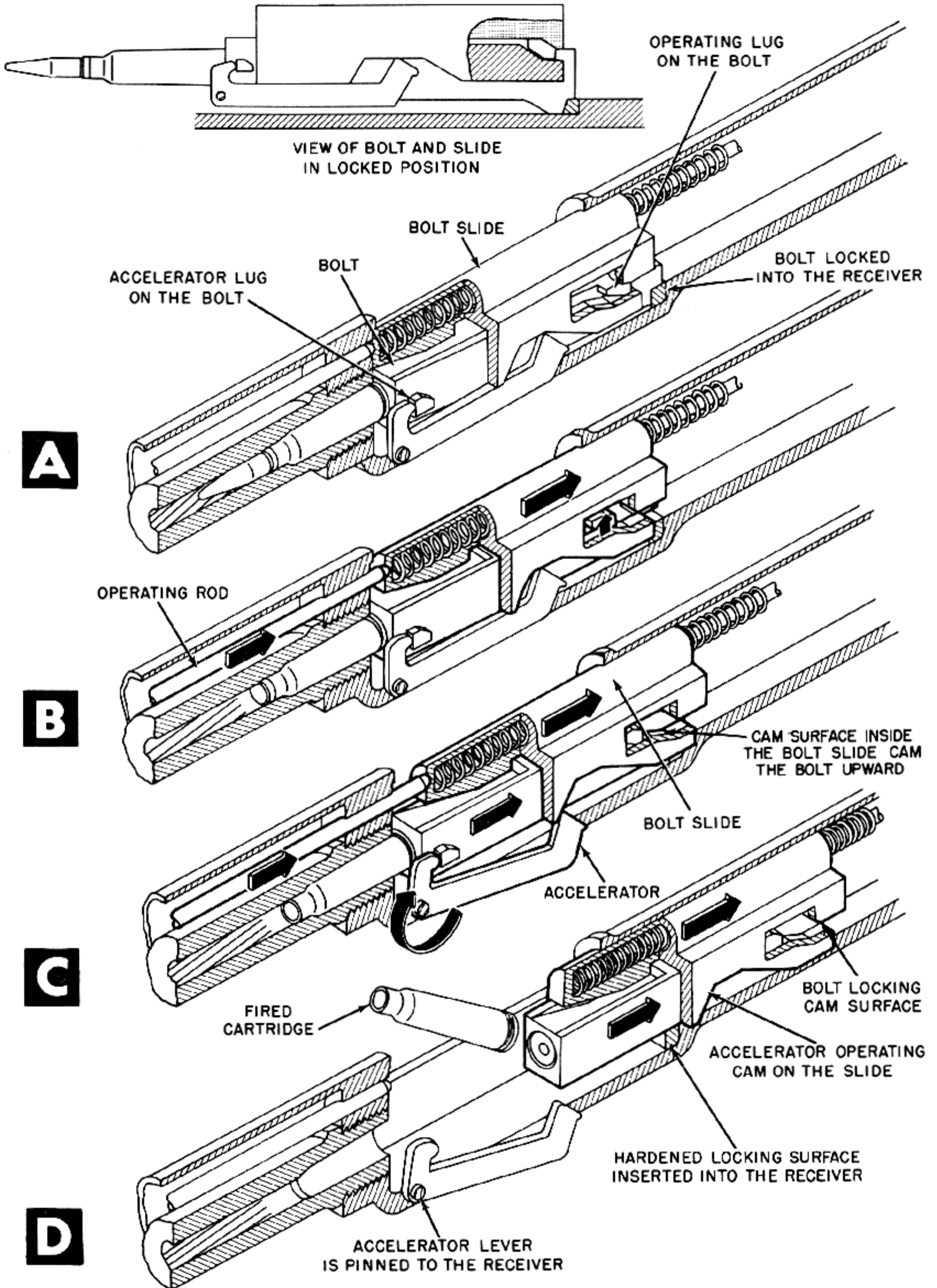


Figure 6-33. Bolt Slide Lifts Bolt Free of Locking Surfaces as It Recoils to Rear.



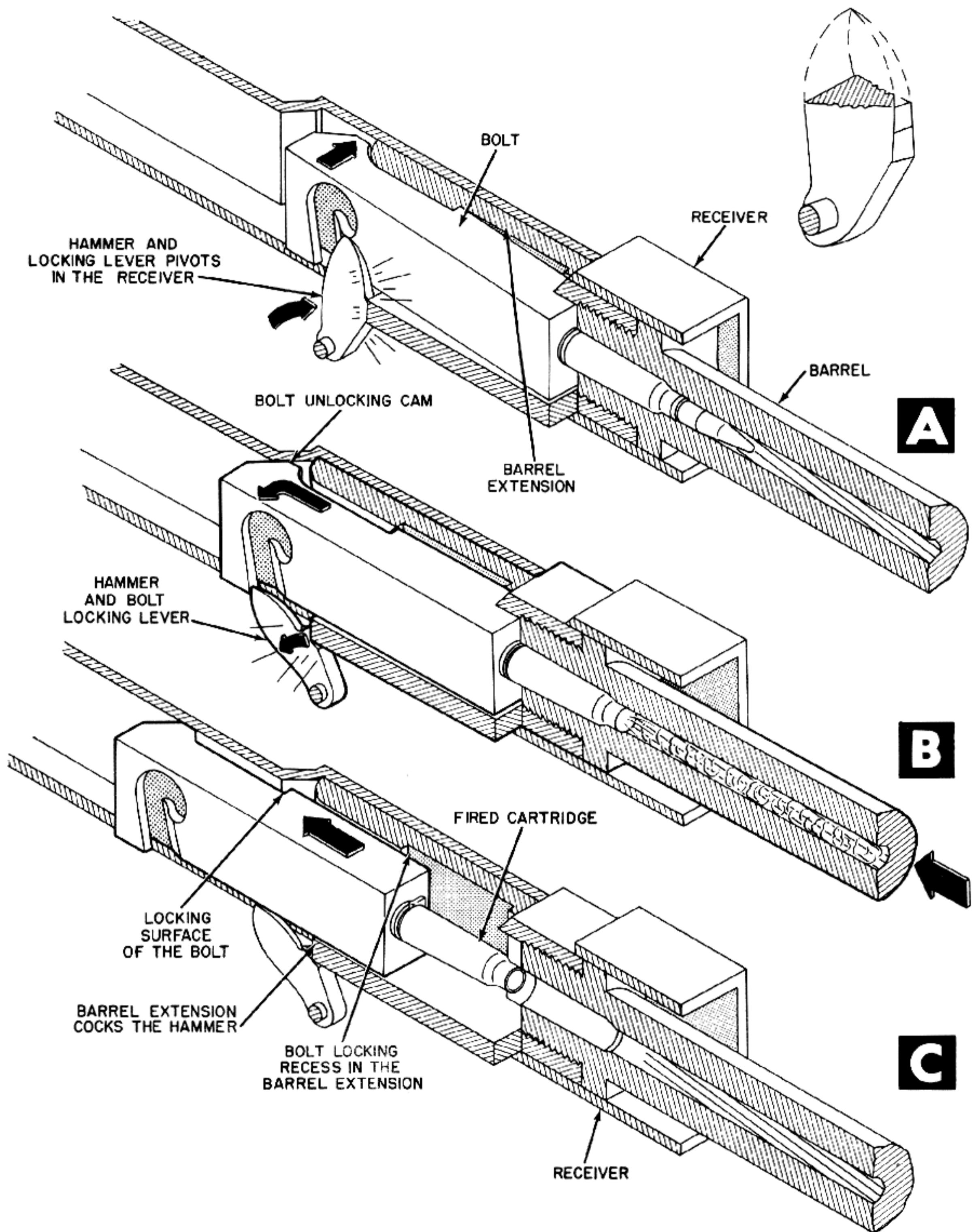


Figure 6-34. Bolt Is Forced Into Locked Position by Action of Hammer.

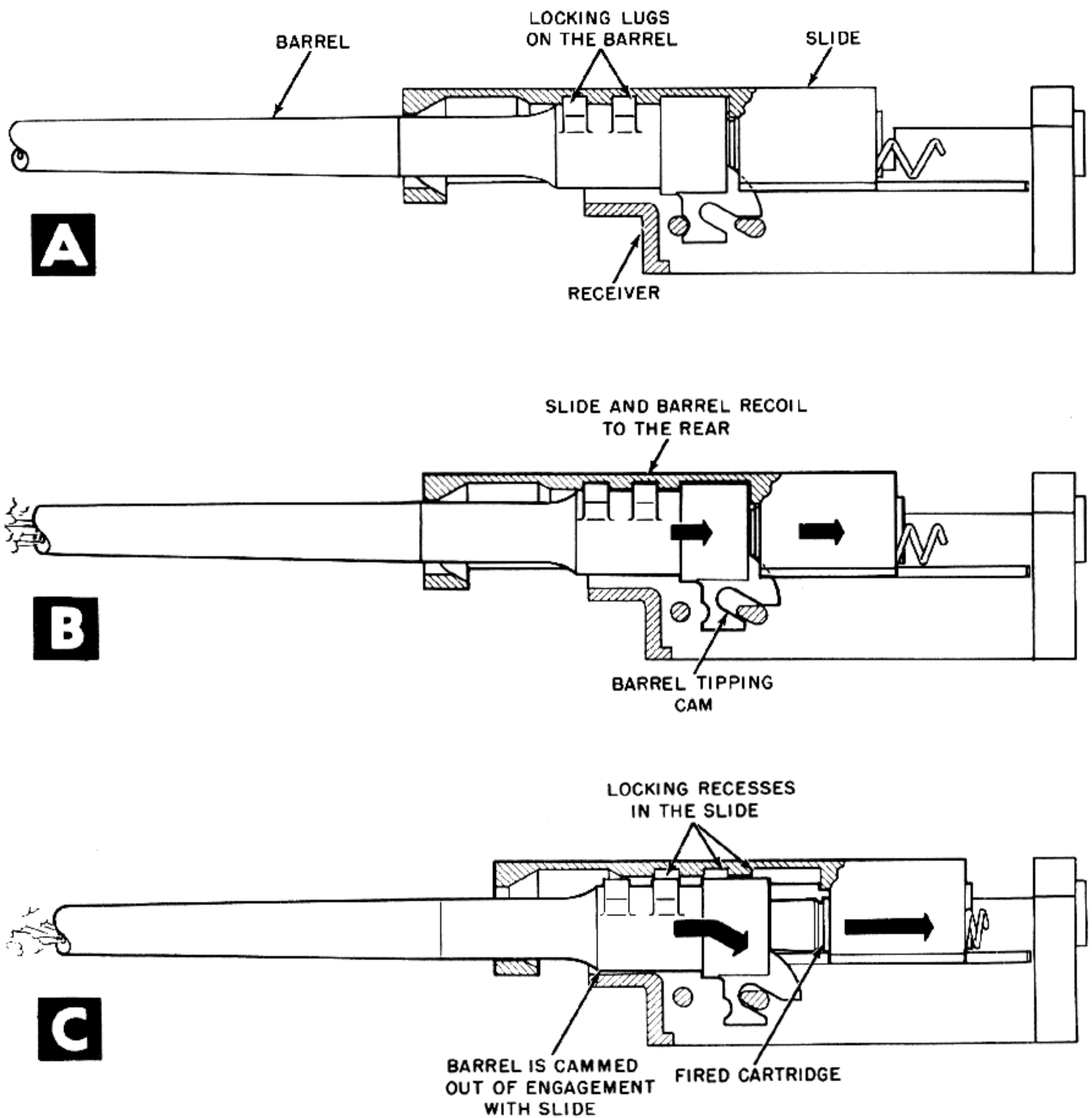


Figure 6-35. As Barrel Recoils, It Is Cammed Free of the Slide.



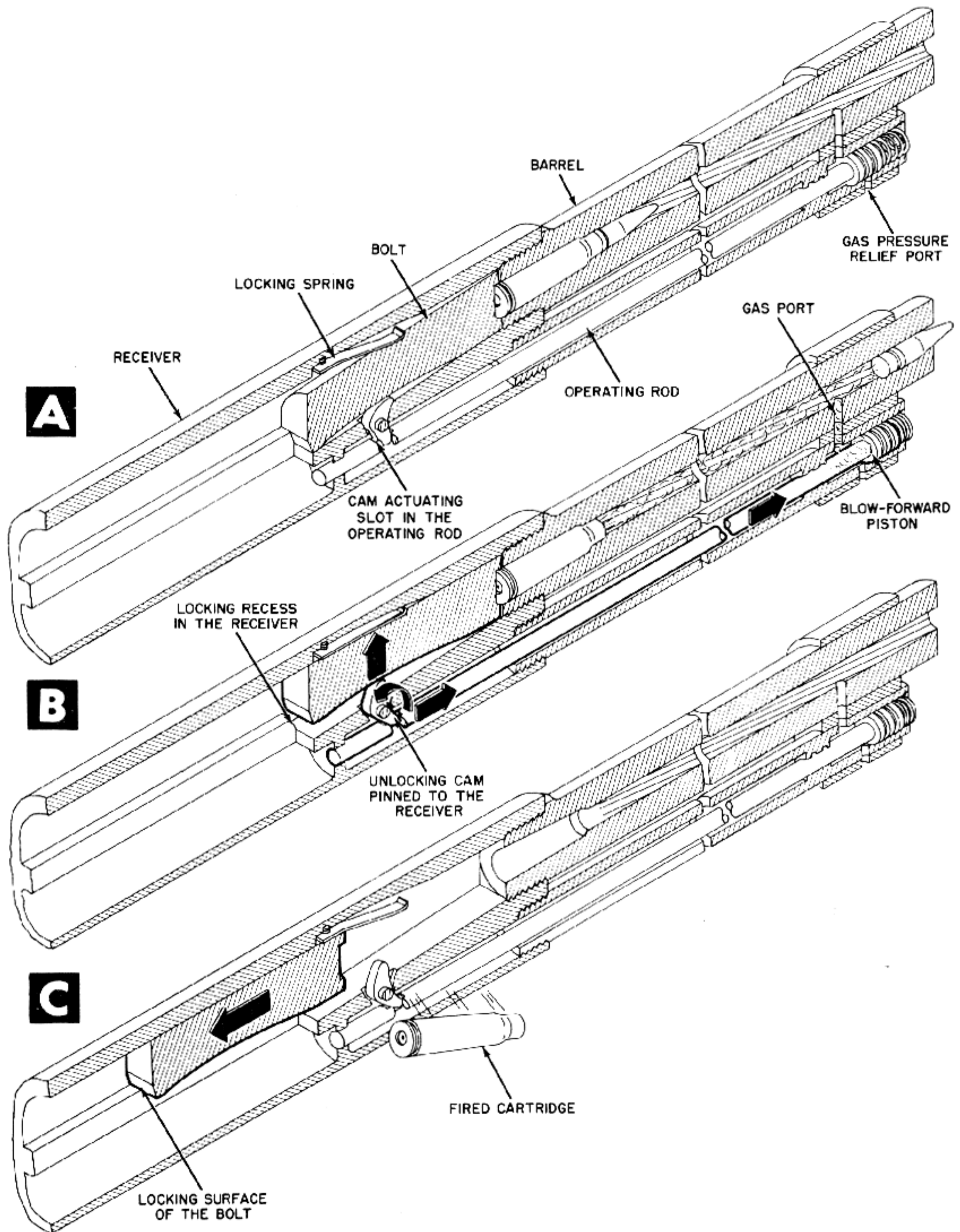


Figure 6-36. Spring Pushes Bolt Into Locking Surface When Operating Rod Removes Unlocking Cam.

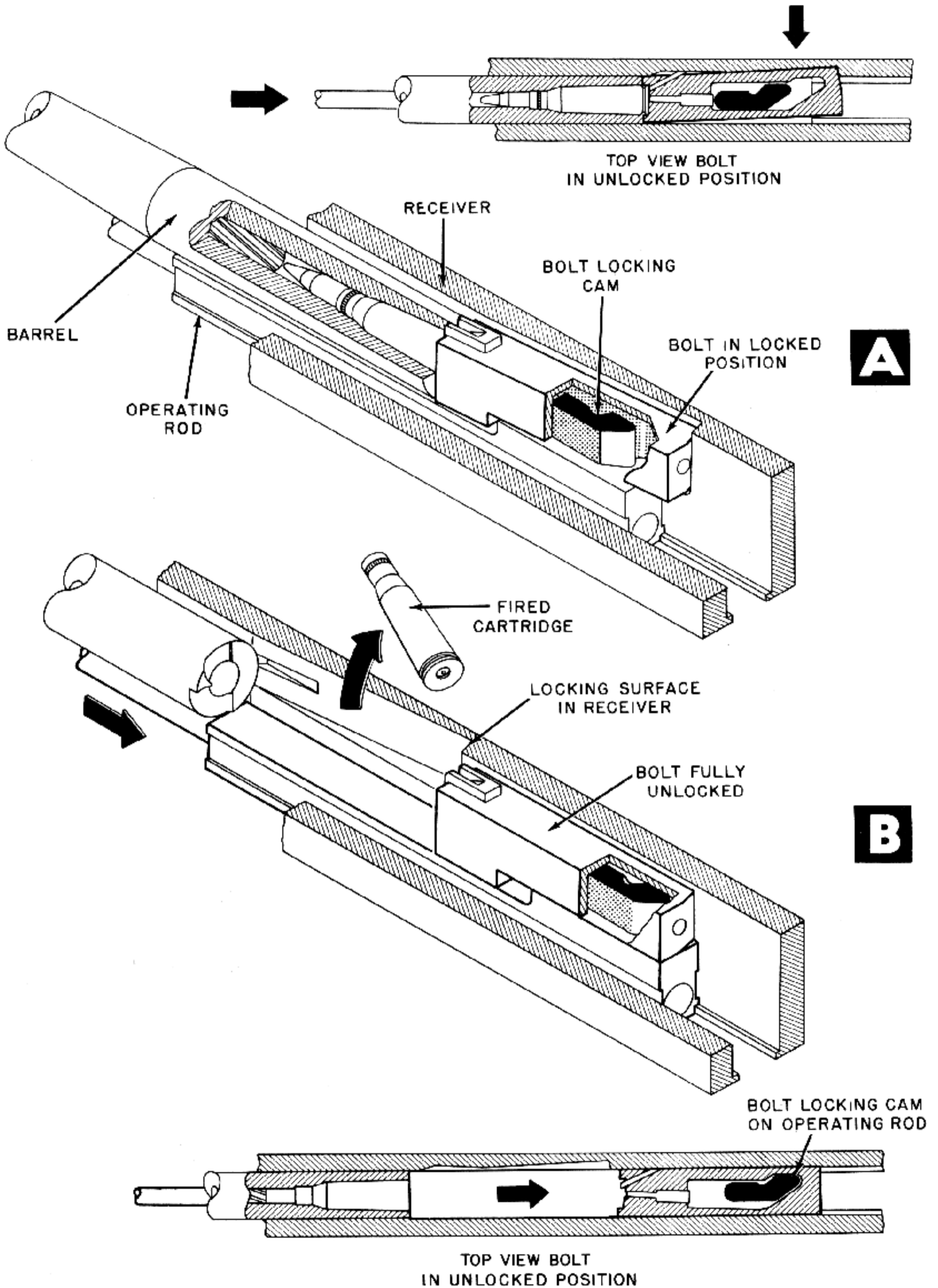


Figure 6-37. Lug on Operating Rod Cams Bolt Out of Side Locking Surface.

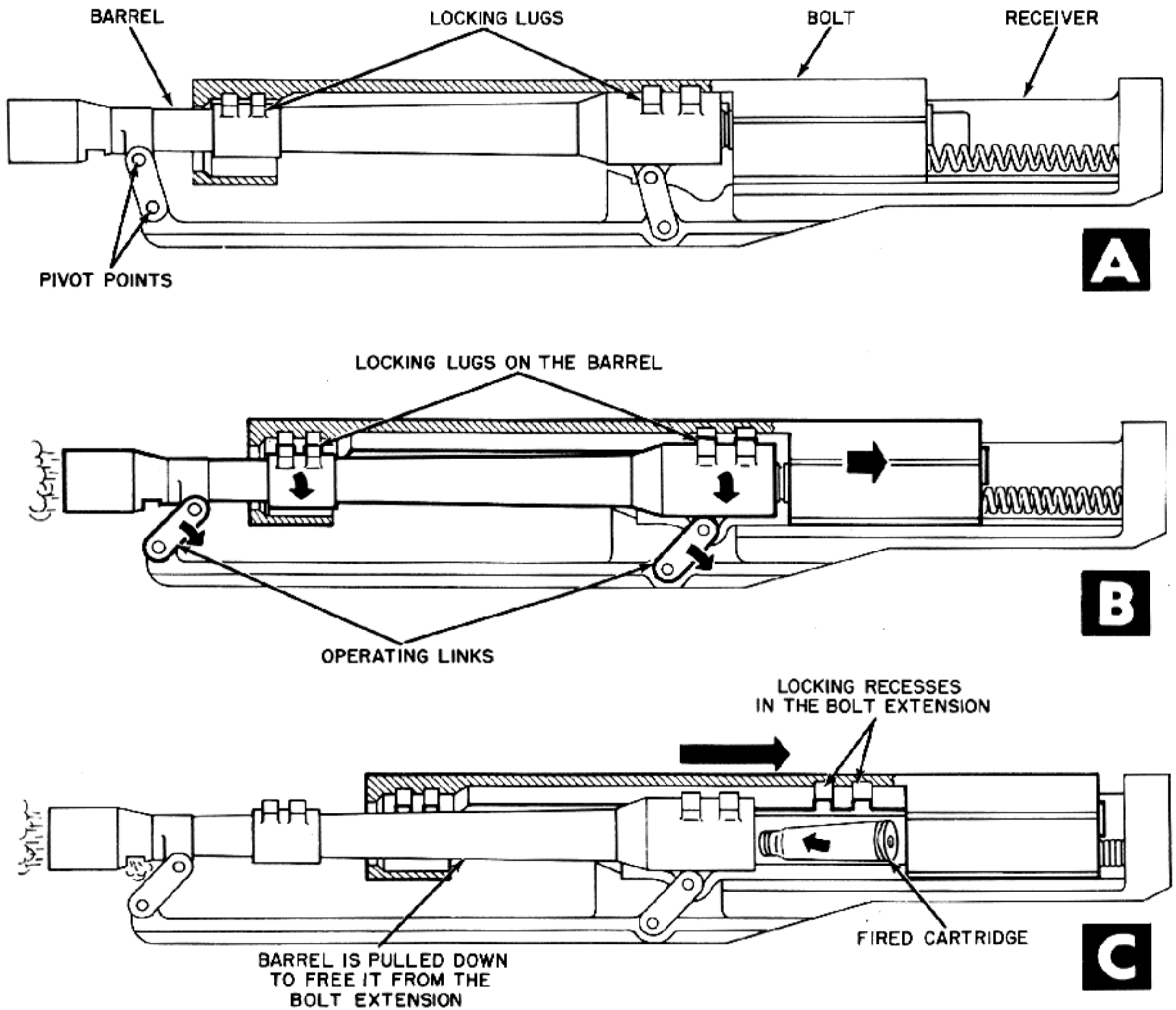


Figure 6-38. Locking Link Unlocks Barrel From Bolt.

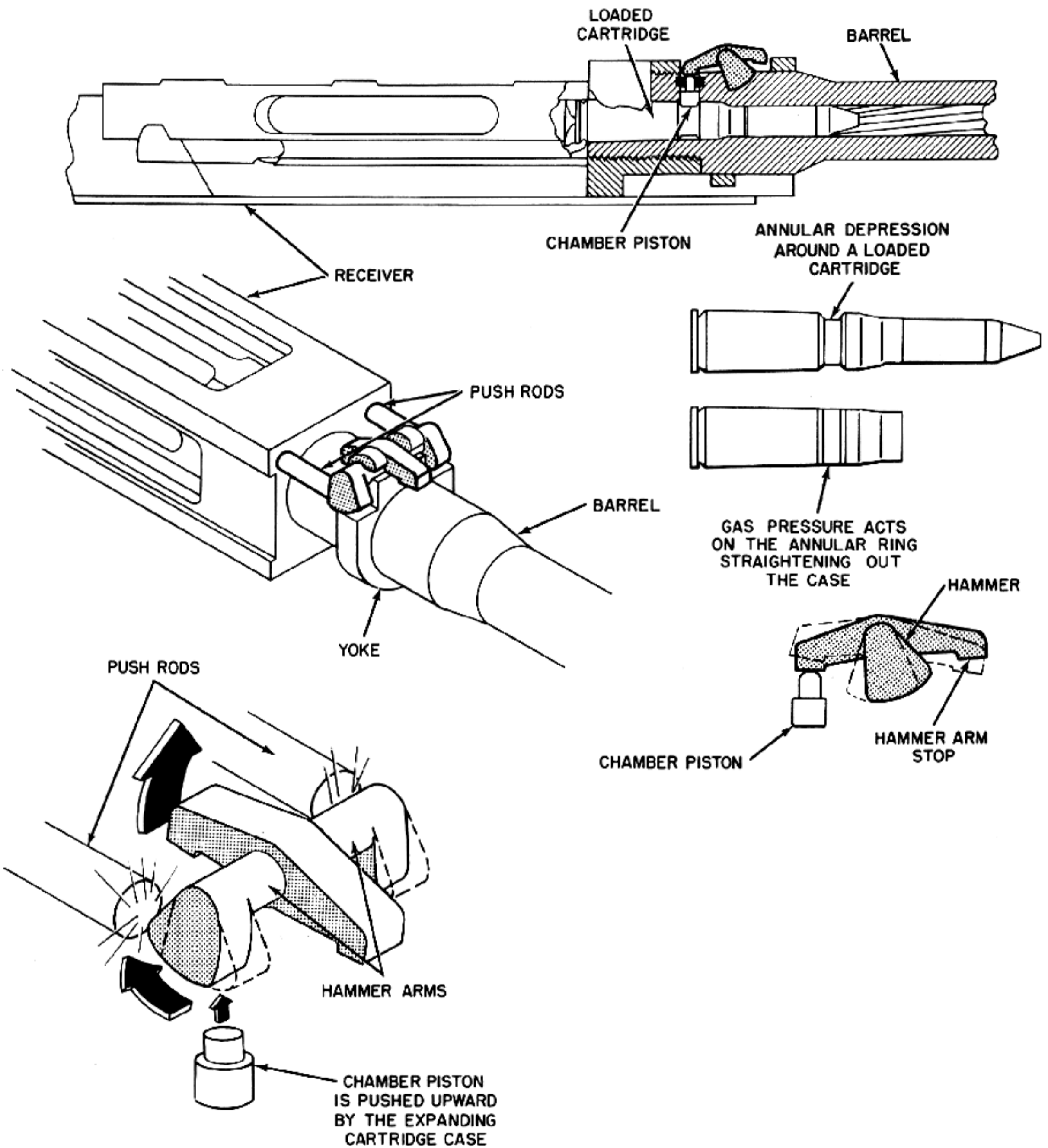


Figure 6-39. Expansion of Cartridge Case Operates Bolt Unlocking Mechanism.



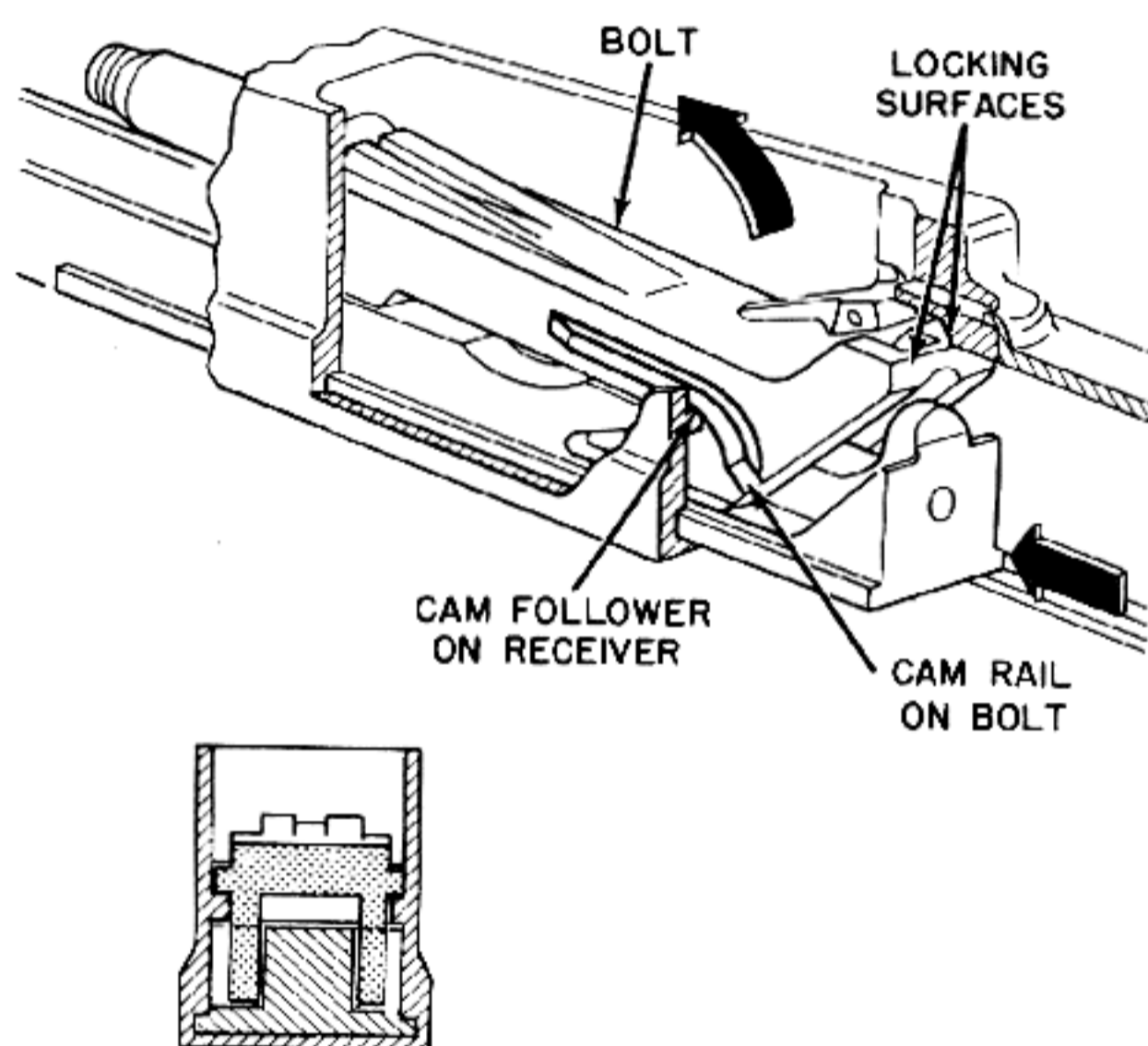


Figure 6-40. Lug on Receiver Cams Breech Block Up at a Predetermined Rate.

E. Locking Block

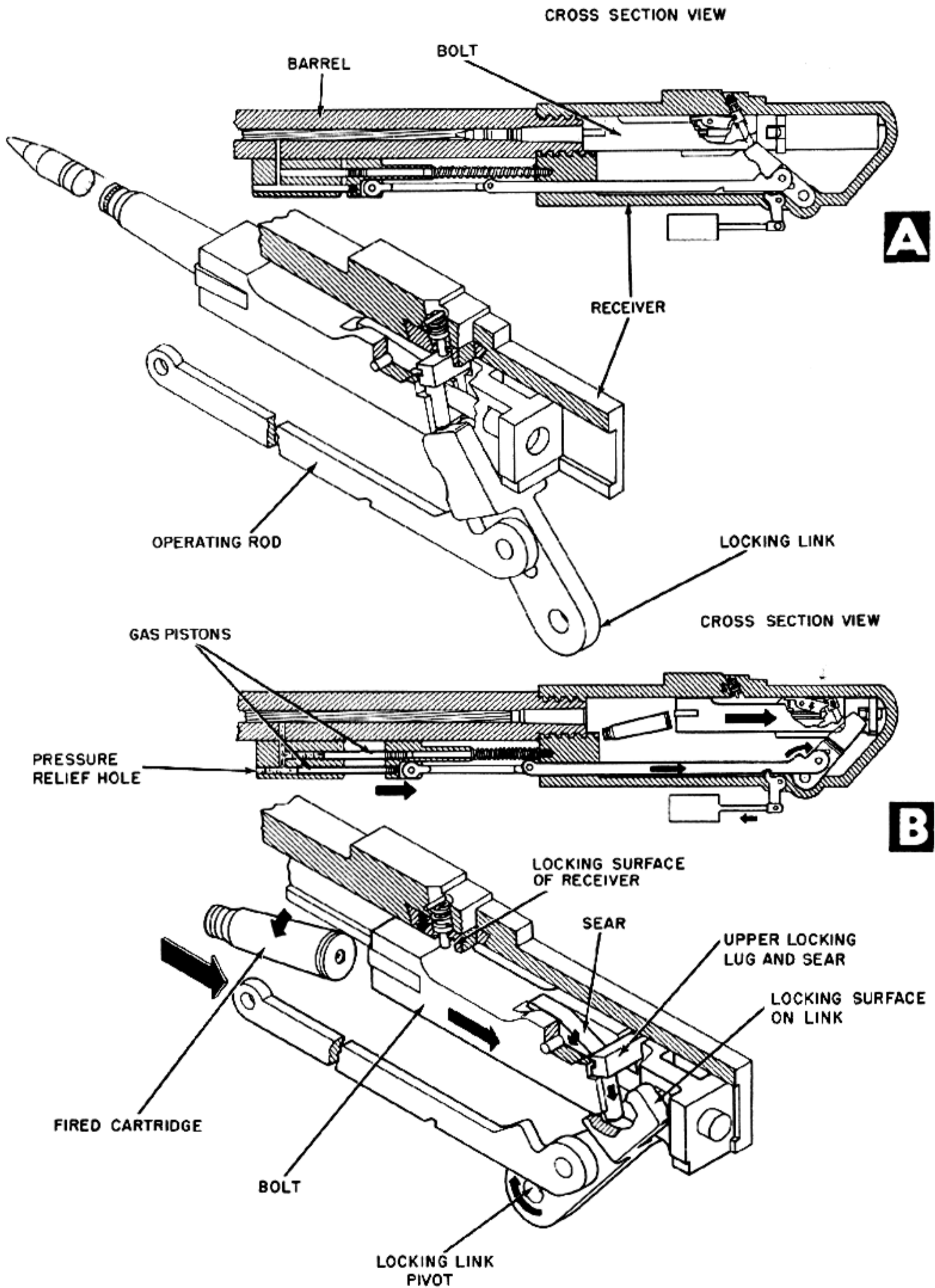


Figure 6-41. Spring Pressure Unlocks Locking Lug When Link Support Is Removed.

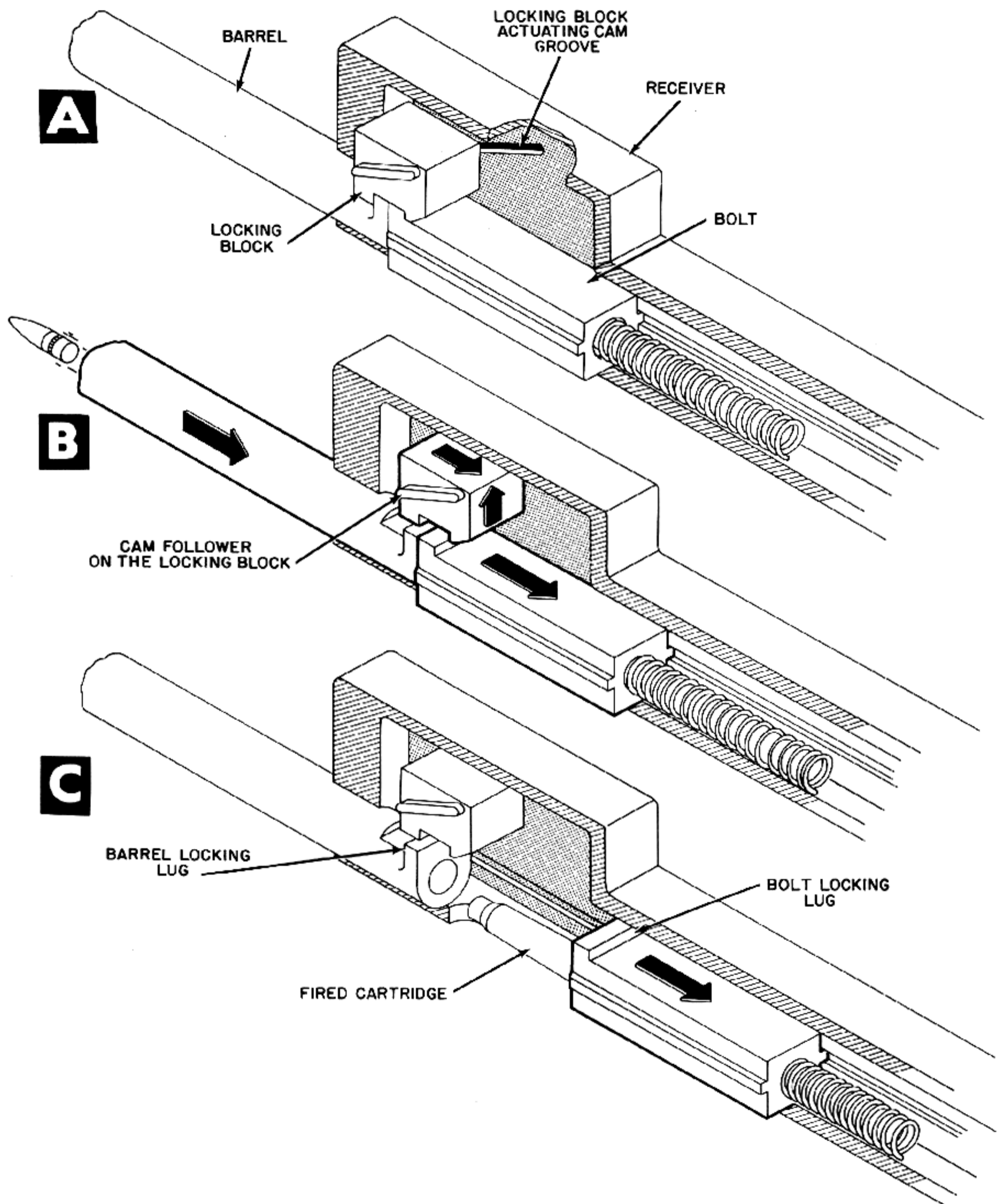


Figure 6-42. Locking Block Is Cammed Free by Grooves in Receiver as Gun Recoils.

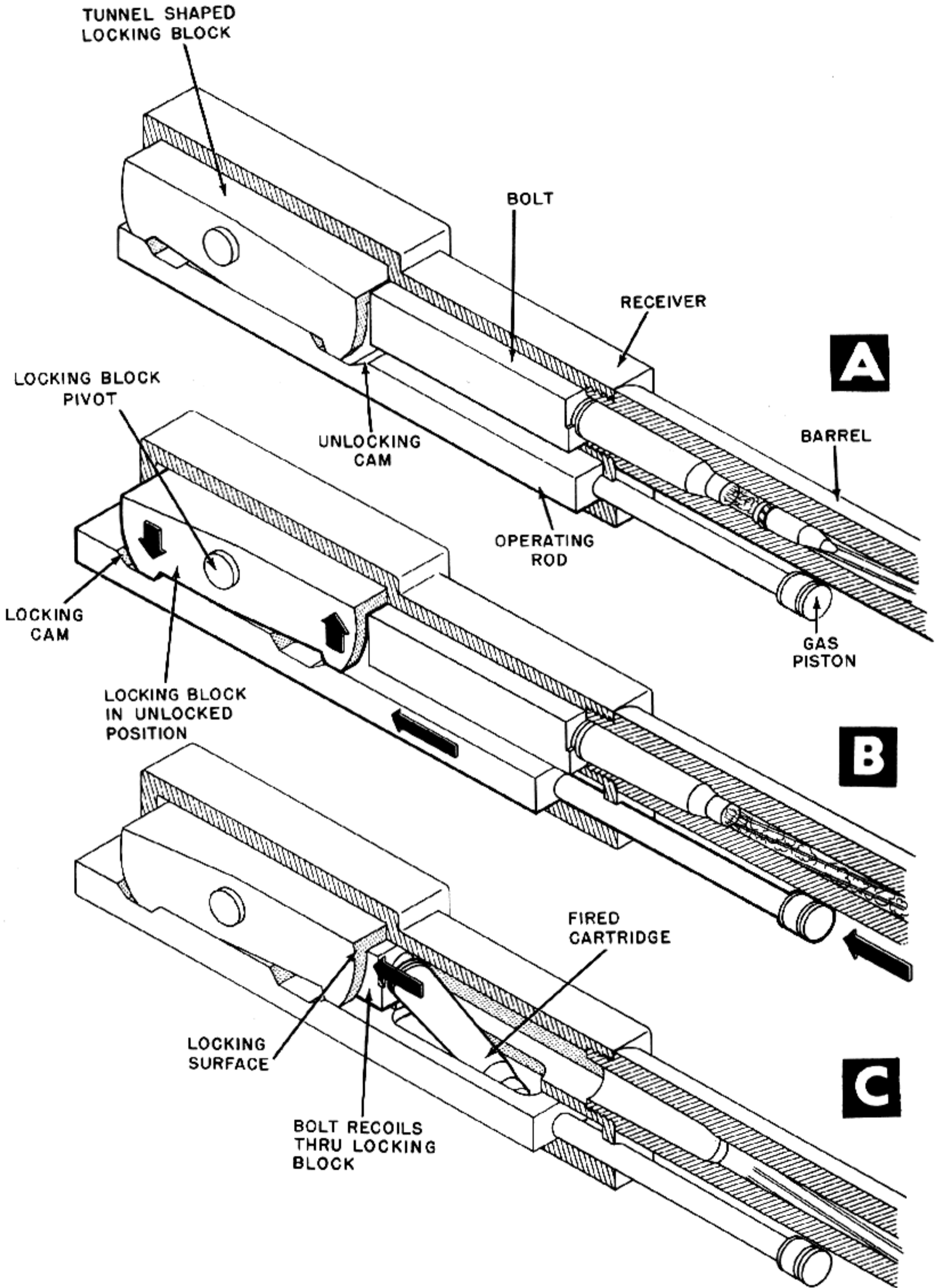
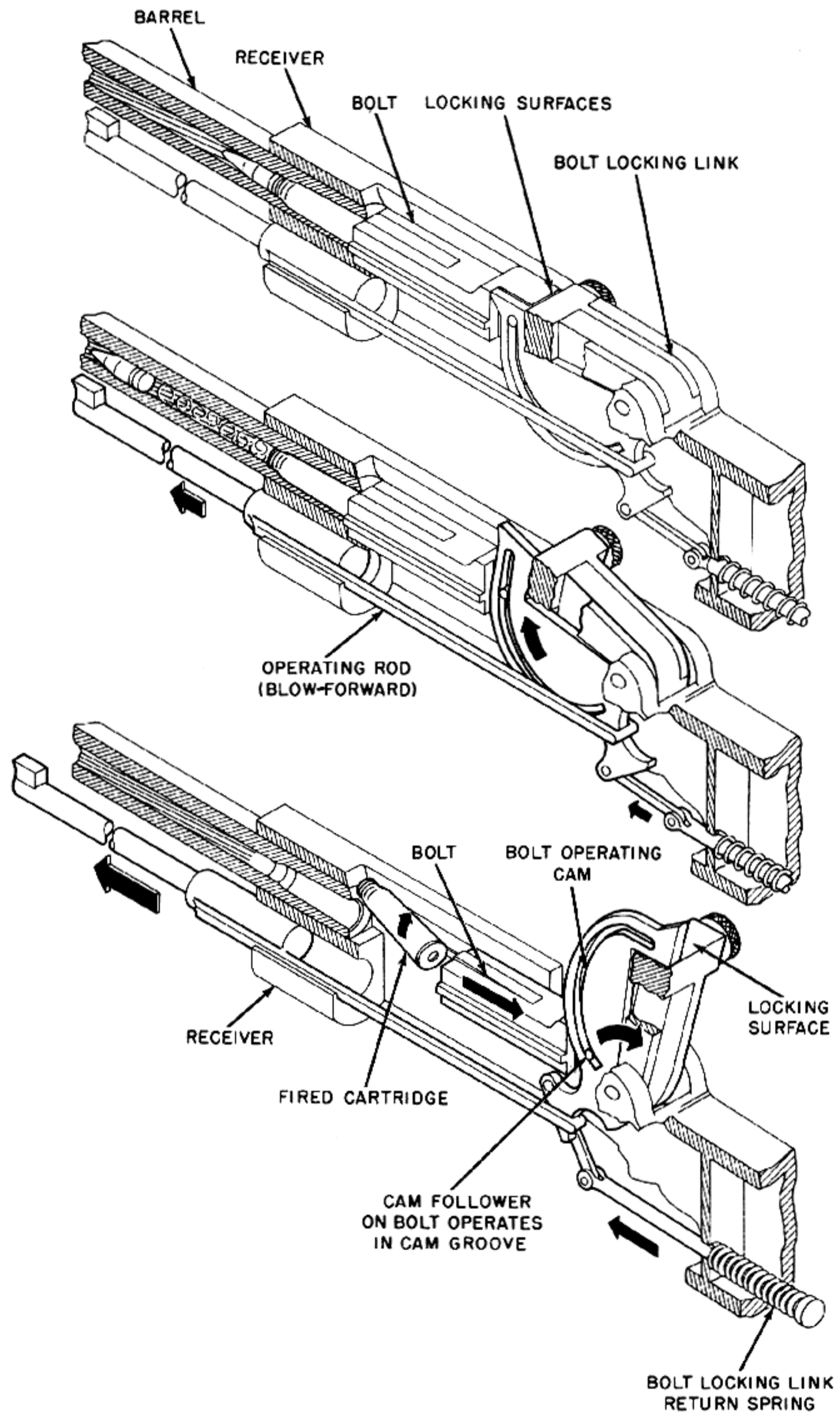


Figure 6-43. Operating Rod Cams Pivoted Locking Block To Unlock Bolt.





**A**

**B**

**C**

Figure 6-44. Operating Rod Lifts Locking Link Free of Bolt.

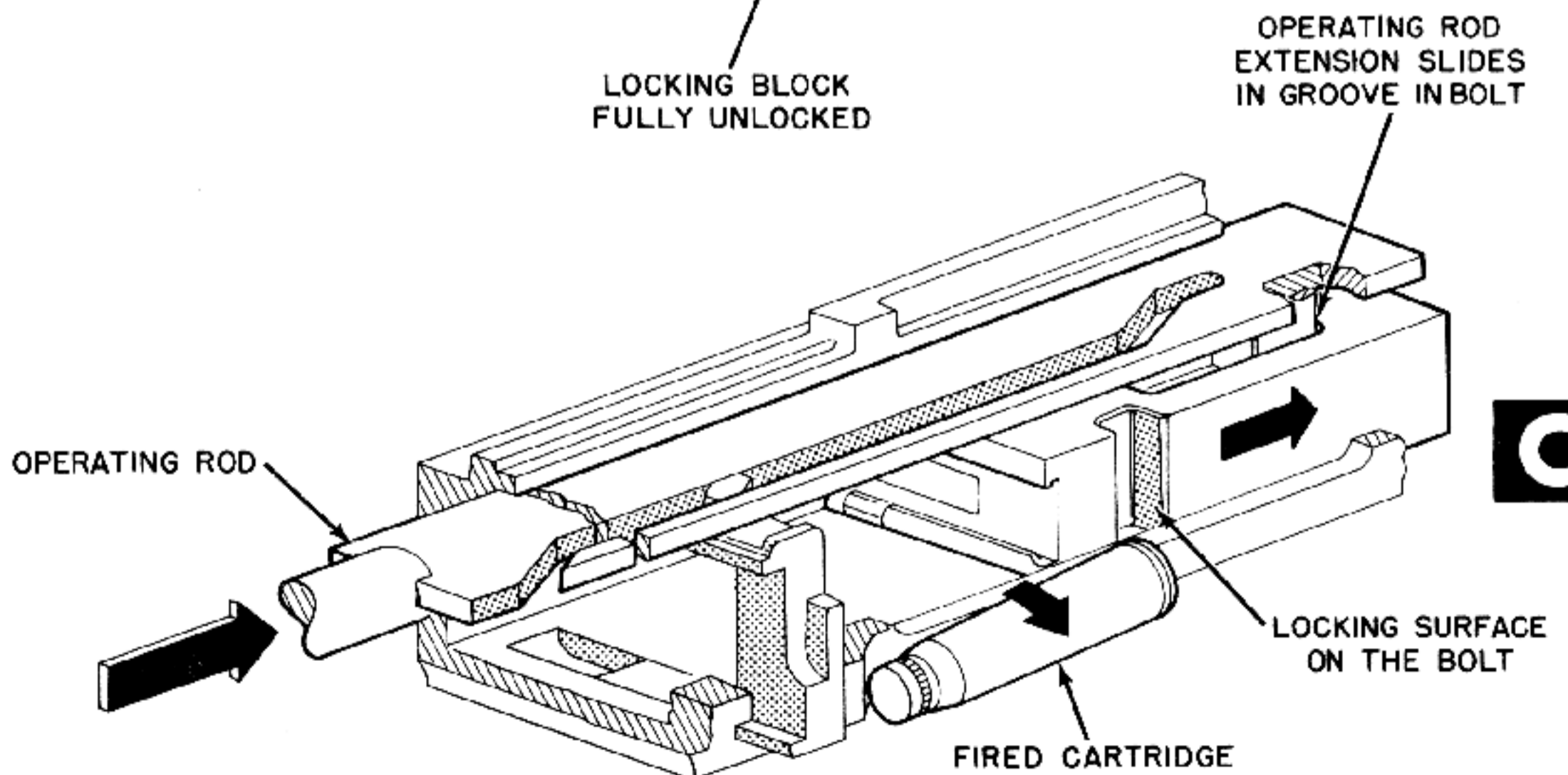
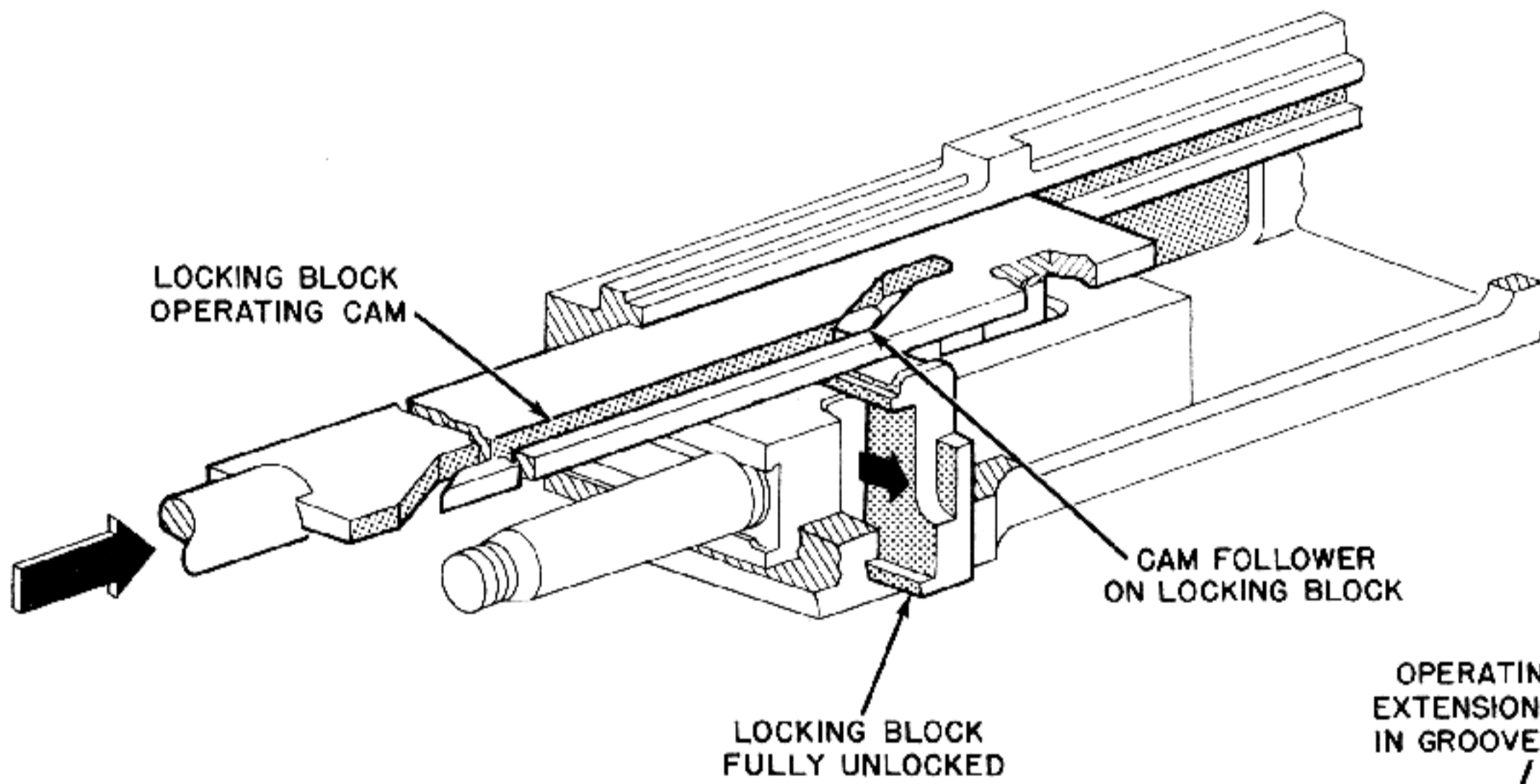
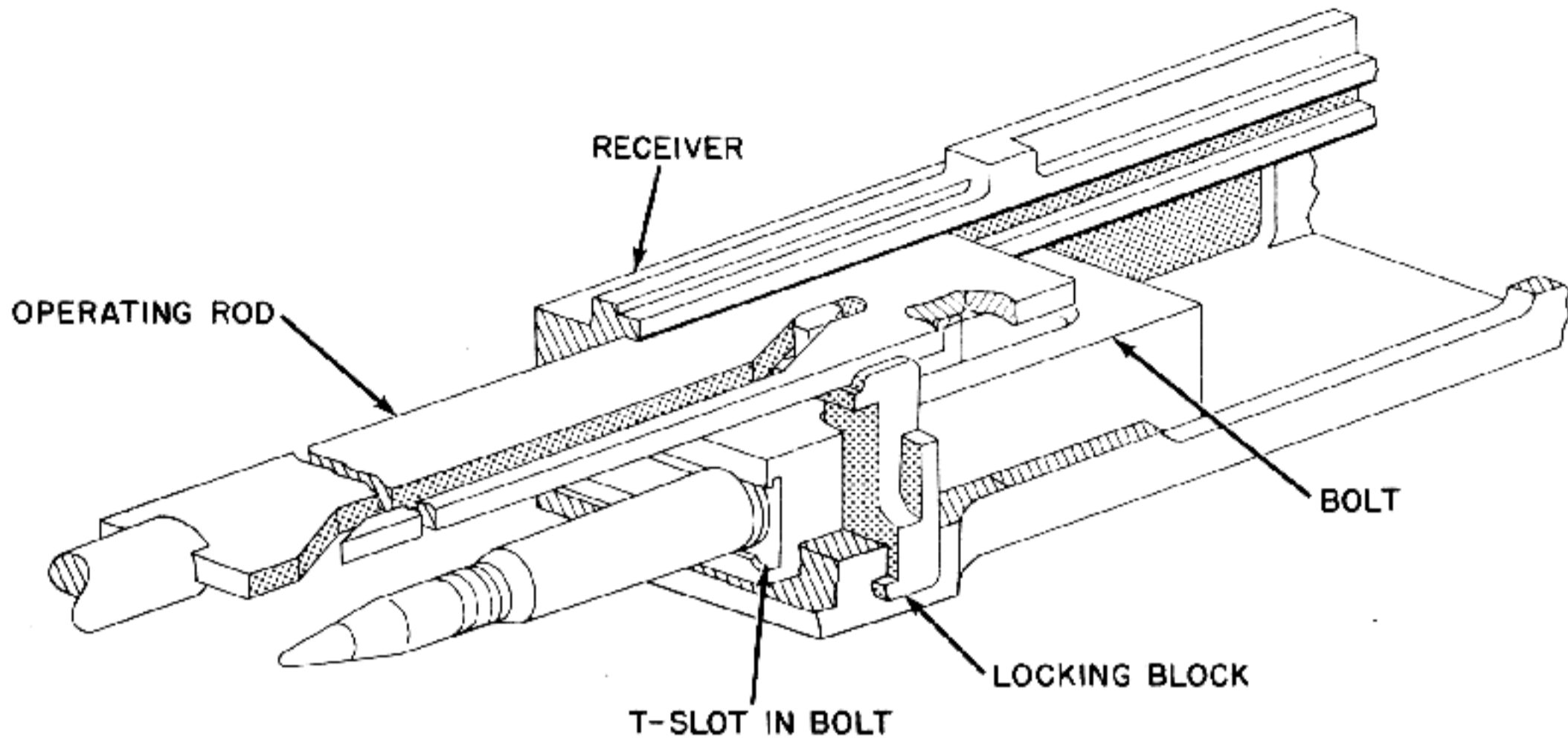


Figure 6-45. Cam Grooved Operating Rod Moves Locking Block Free of Bolt.

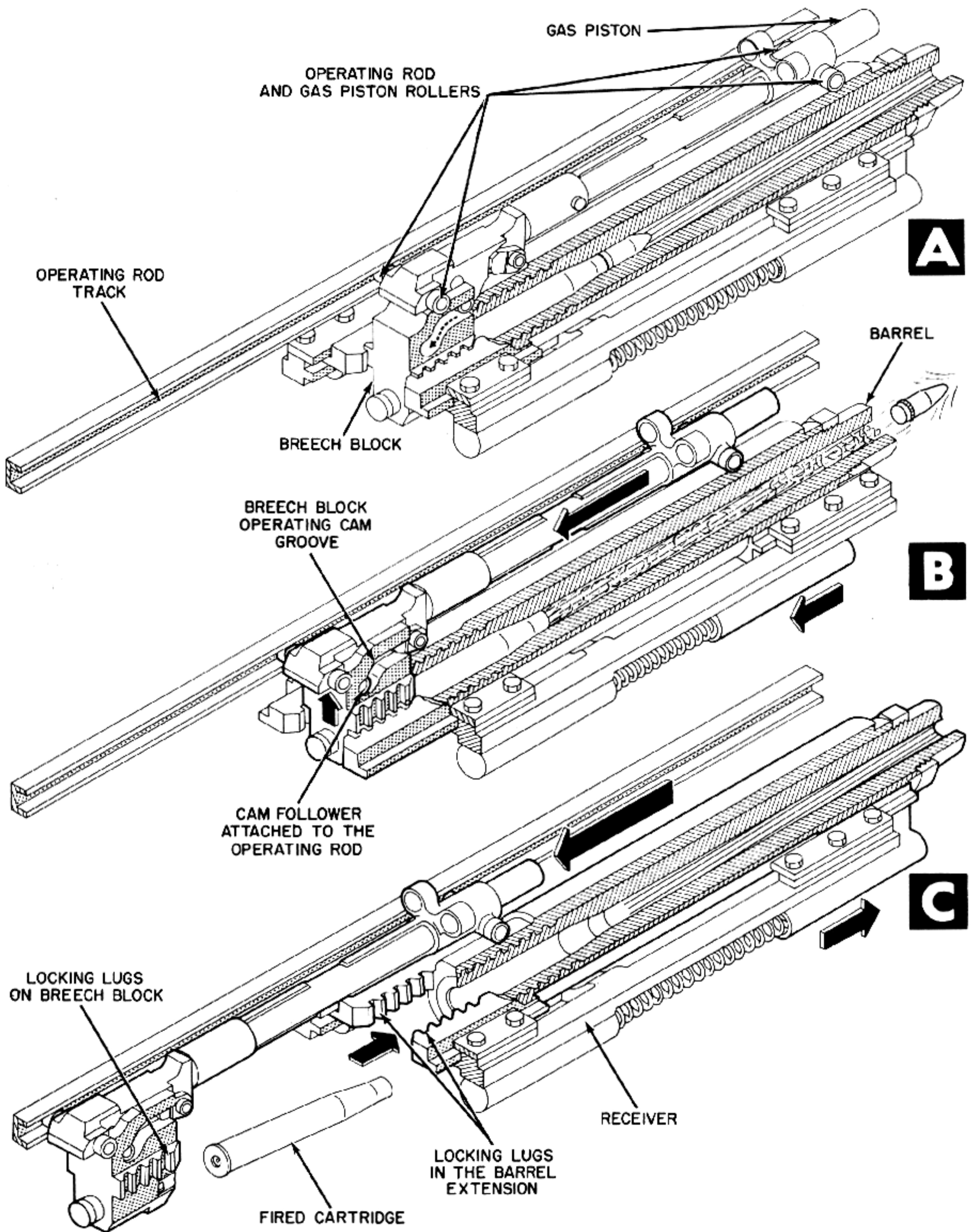


Figure 6-46. Operating Rod Cams Breech Block Free of Barrel Extension.



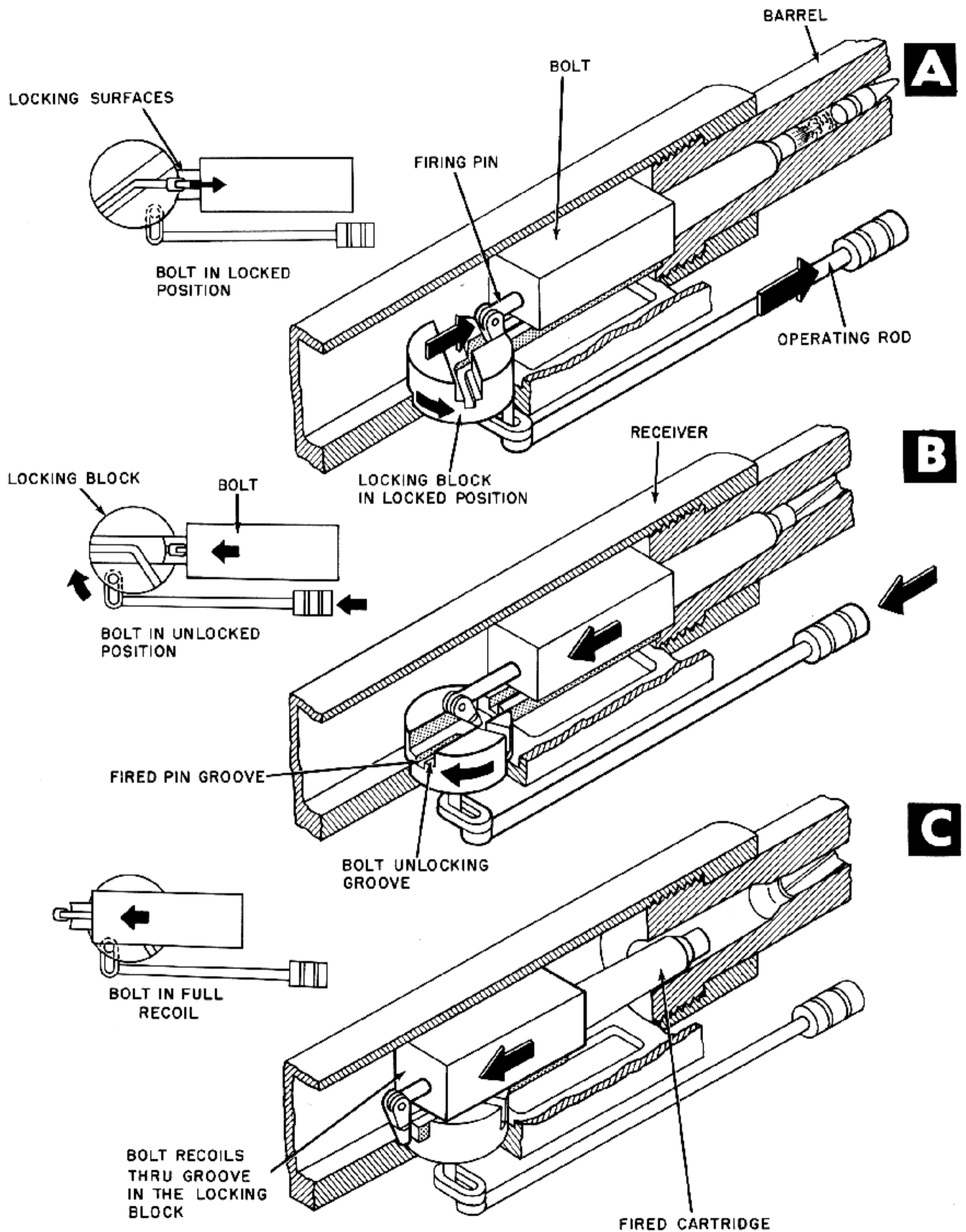


Figure 6-47. Gas Piston Rotates Locking Block to Unlocked Position.



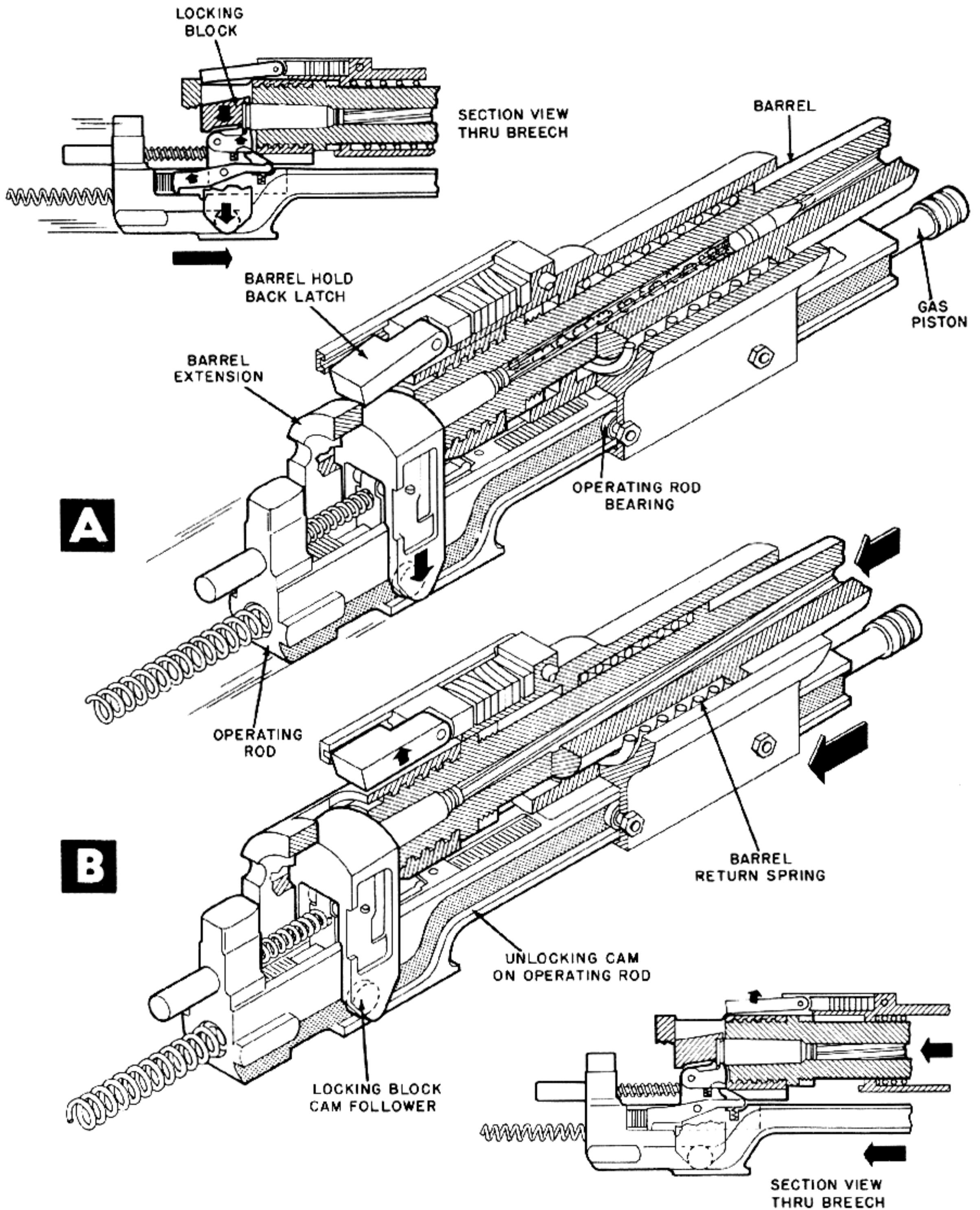
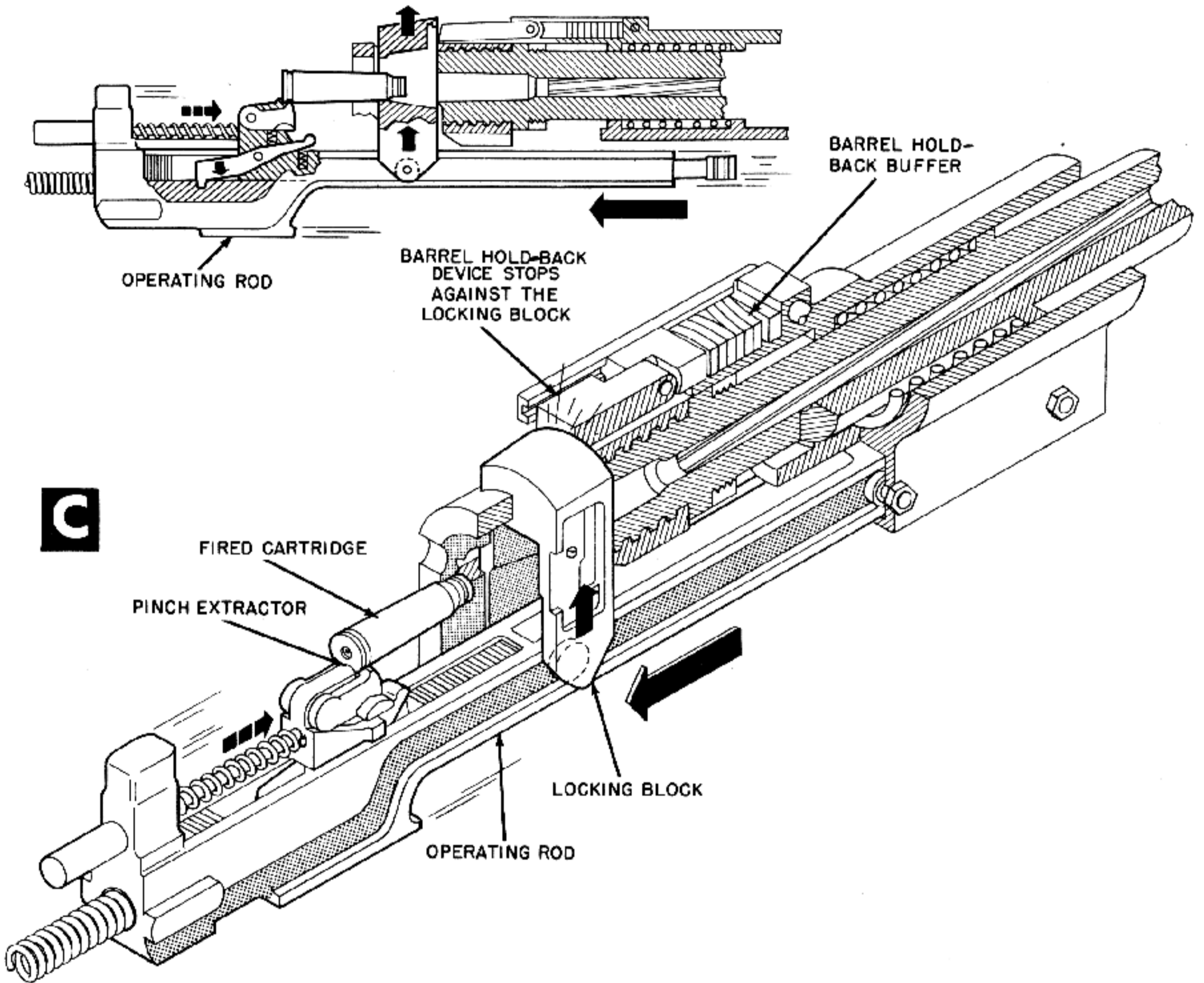


Figure 6-48. Cam Groove on Operating



Rod Moves Locking Block Free of Barrel Face.

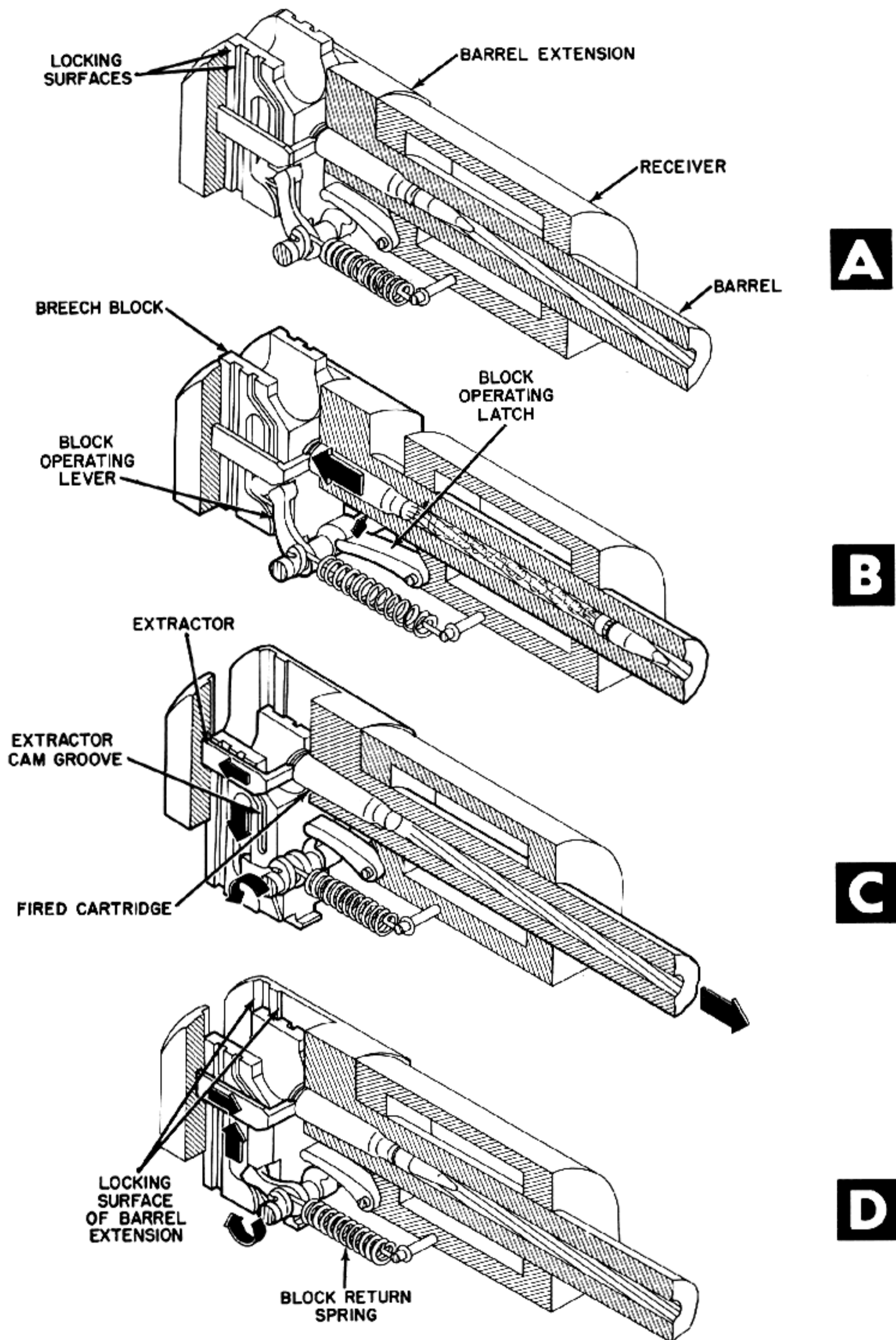


Figure 6-49. Block Operating Latch Opens Breech Block on Counter-Recoil.



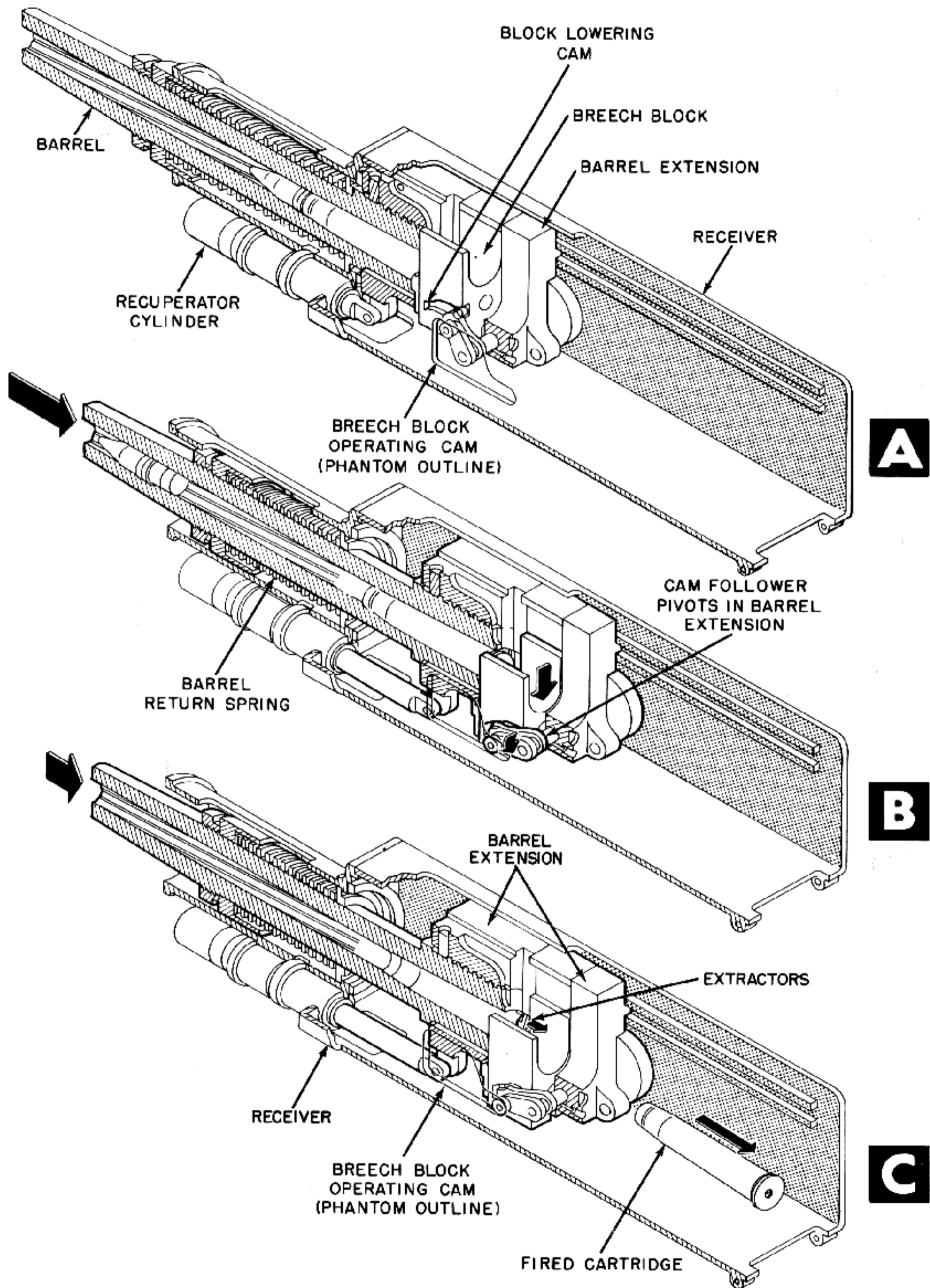


Figure 6-50. Breech Block Operating Cam Opens Breech Block During Recoil.



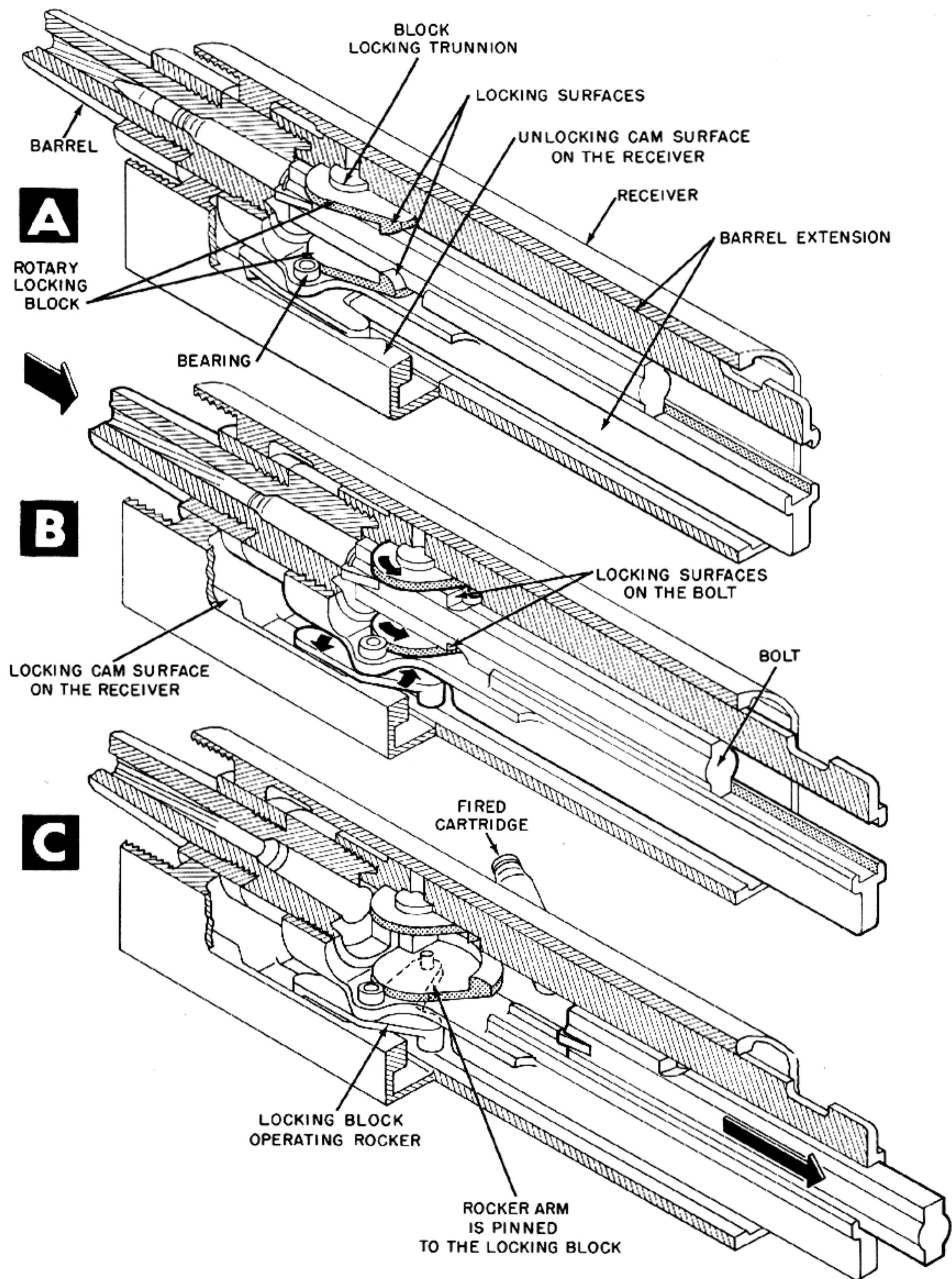


Figure 6-51. Bolt Is Unlocked by Action of Rotary Locking Block.

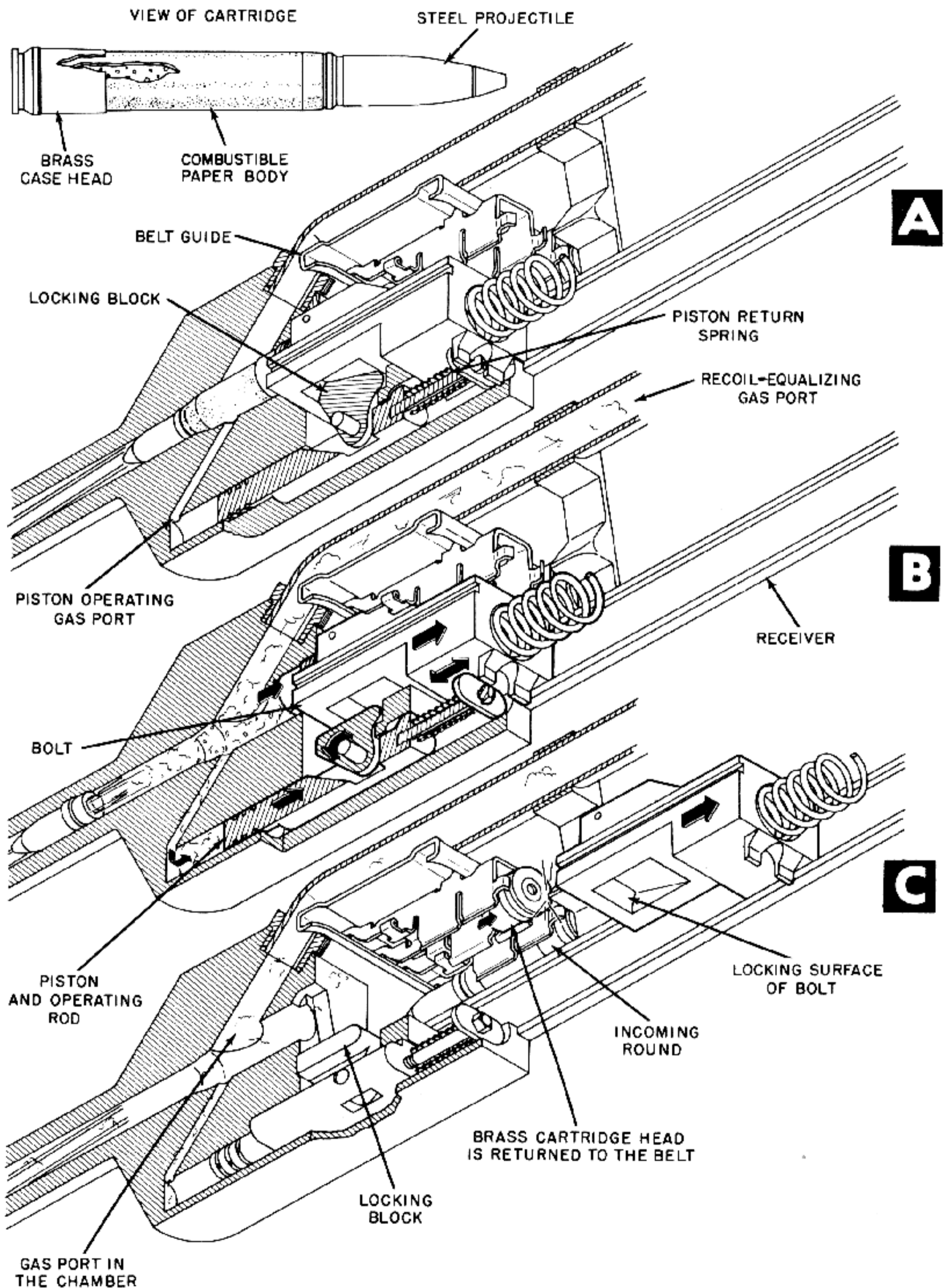


Figure 6-52. Gas Piston Cams Locking Block Free of the Bolt.

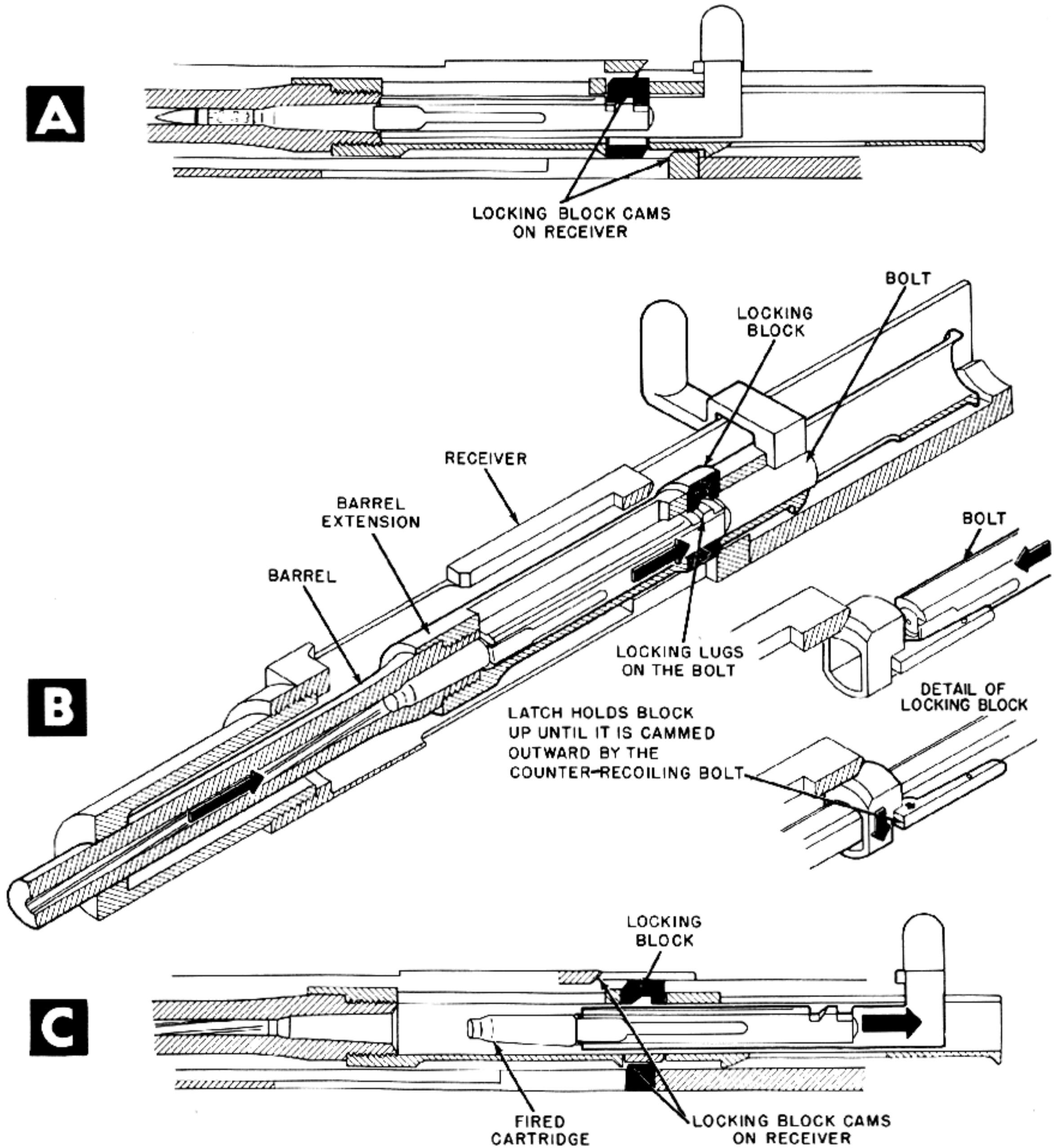


Figure 6-53. Recoiling Barrel Extension Cams Locking Block Free of the Bolt.



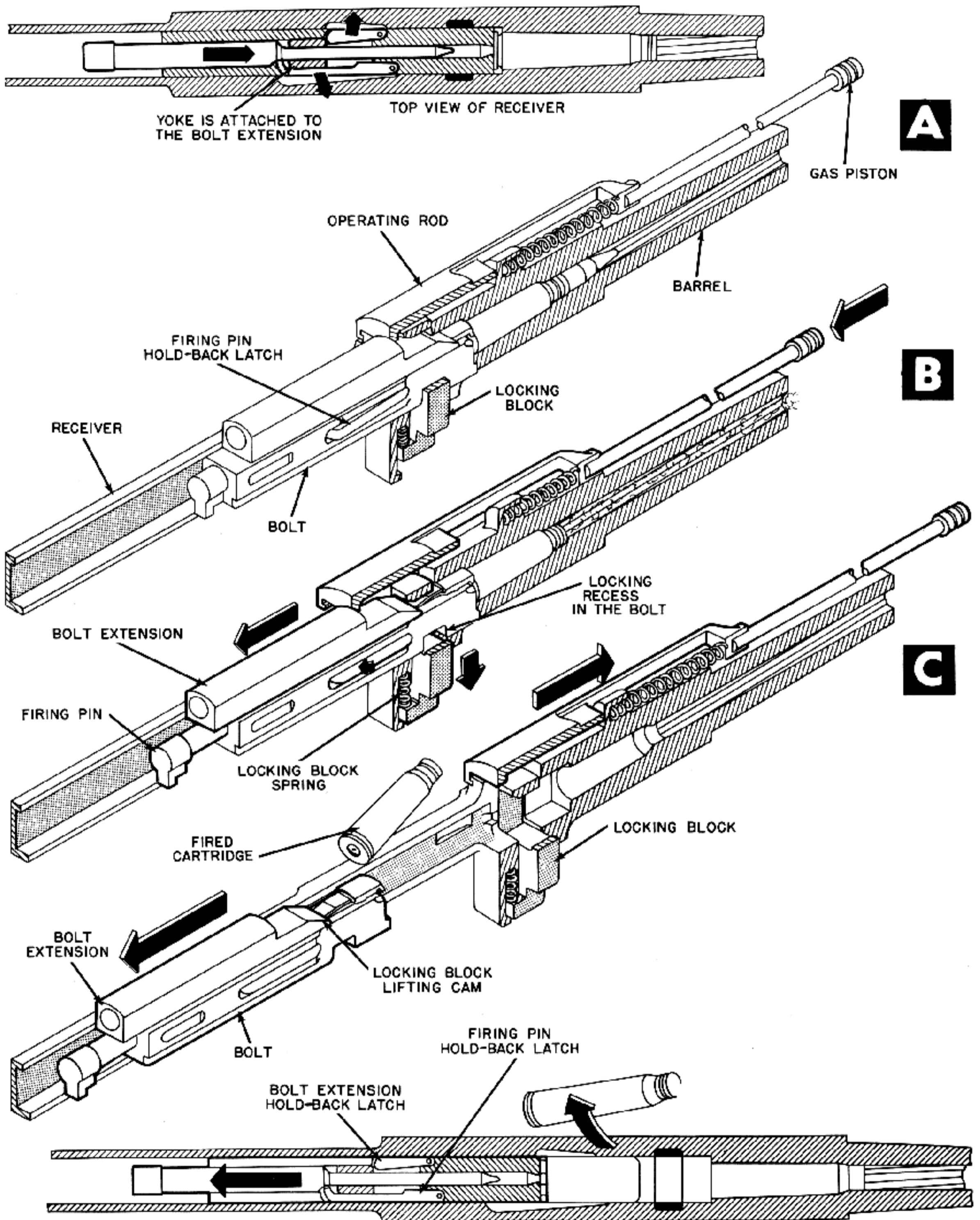


Figure 6-54. After Bolt Extension Recoils, Spring Forces Locking Block Free of the Bolt.



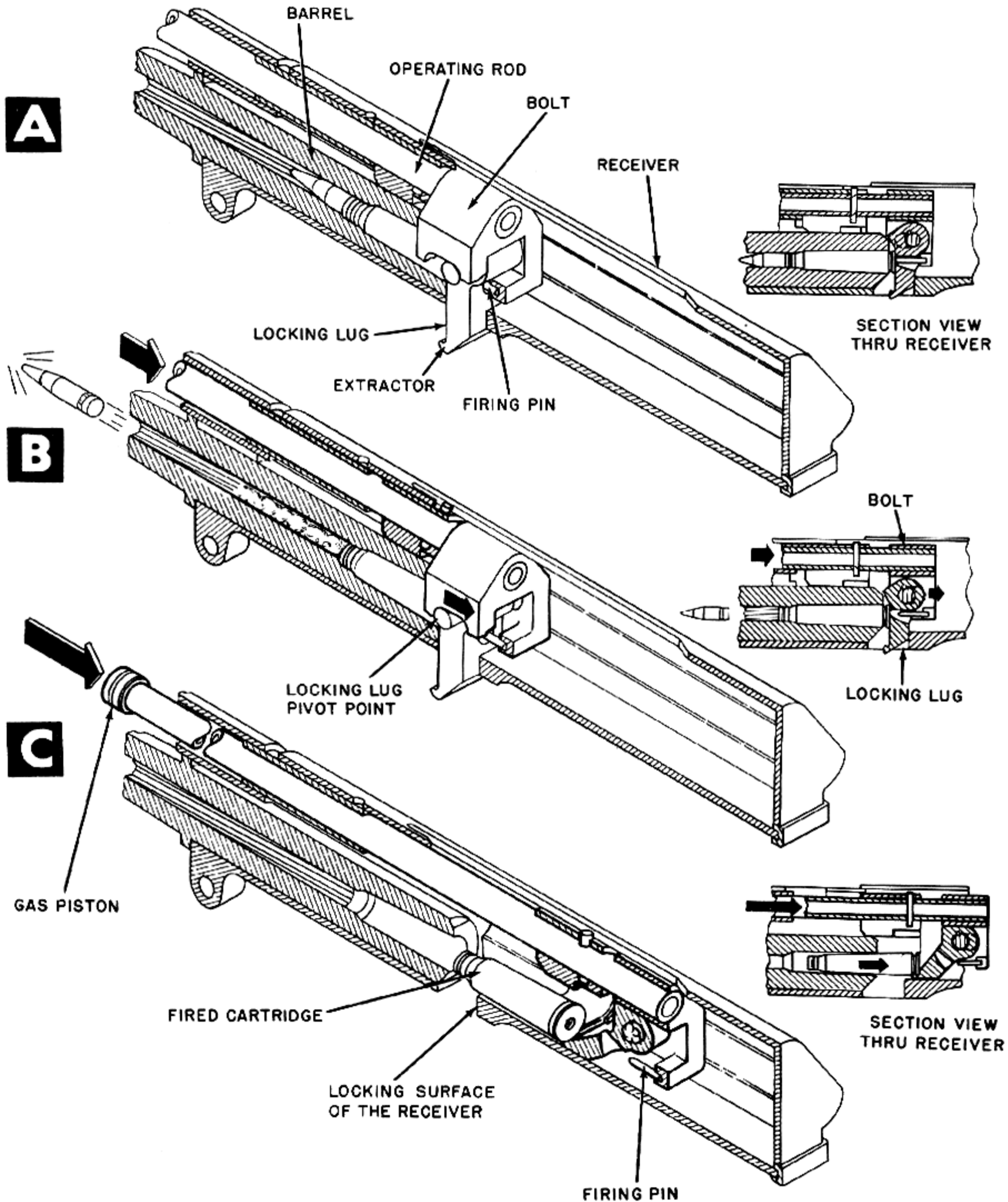


Figure 6-55. Operating Rod Rotates Locking Lug Free of Locking Surface.

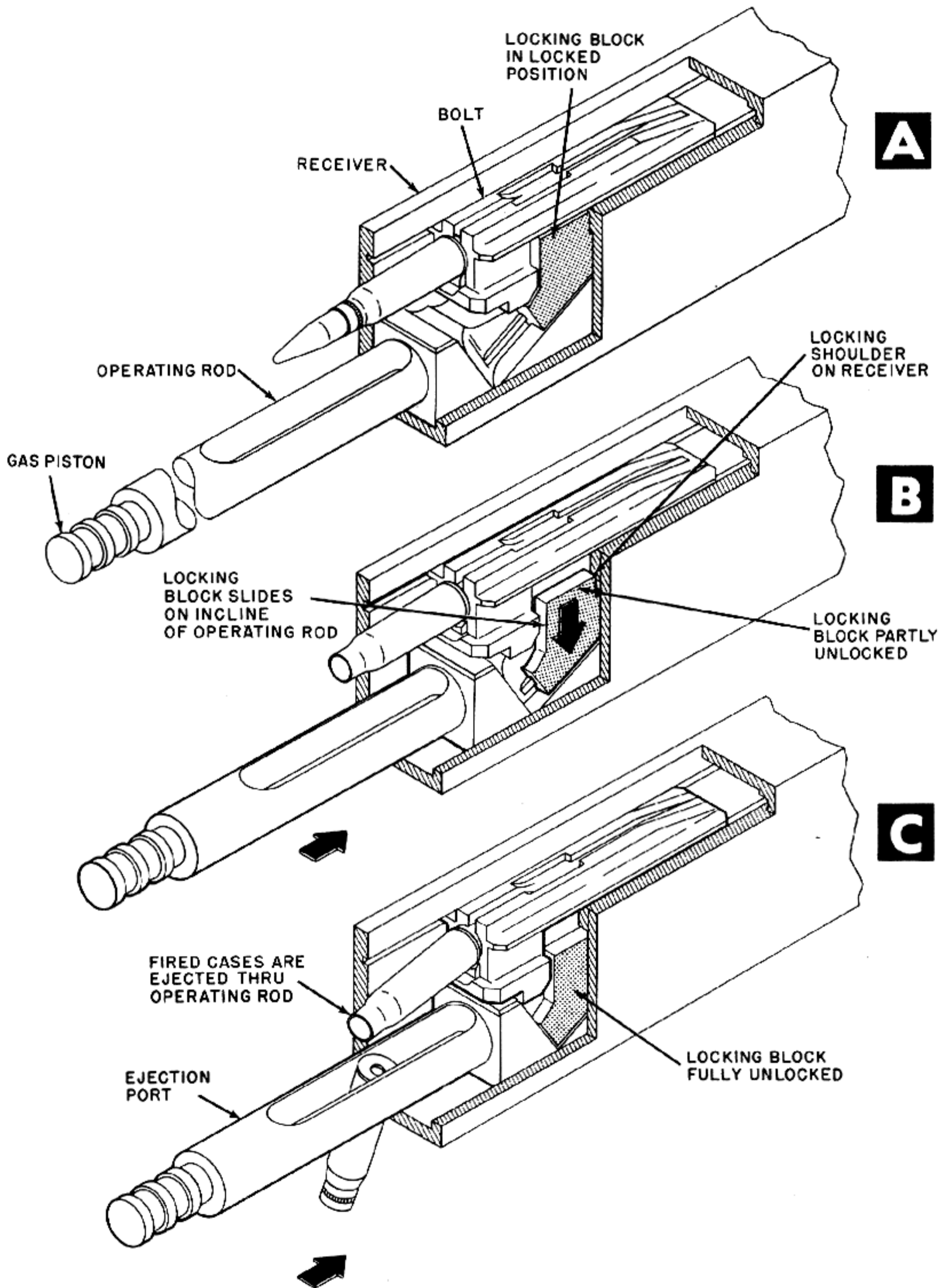


Figure 6-56. Operating Rod Cams Locking Block Free of Locking Surfaces of Receiver.

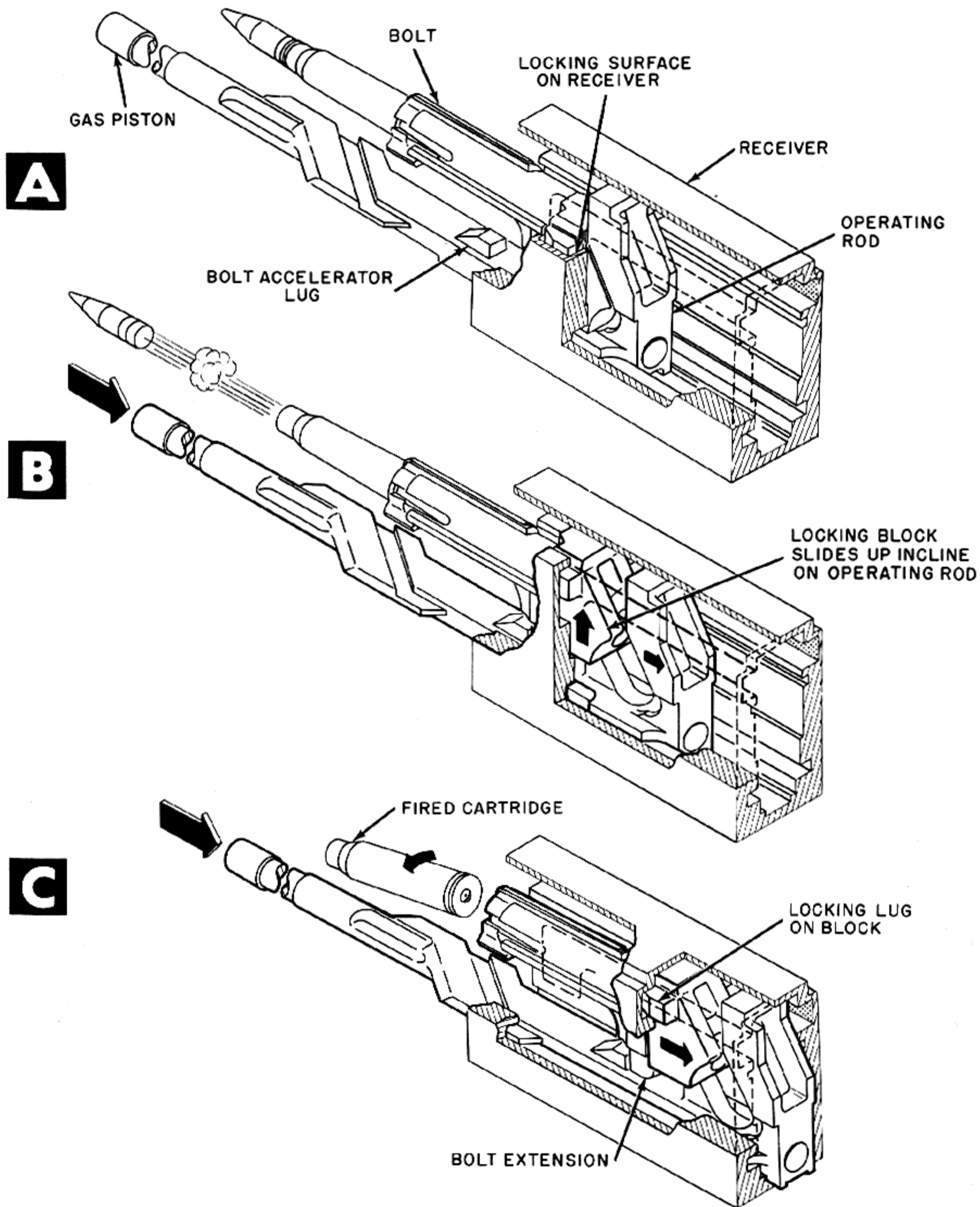


Figure 6-57. Operating Rod Cams Locking Block Free of Locking Surfaces of Receiver.



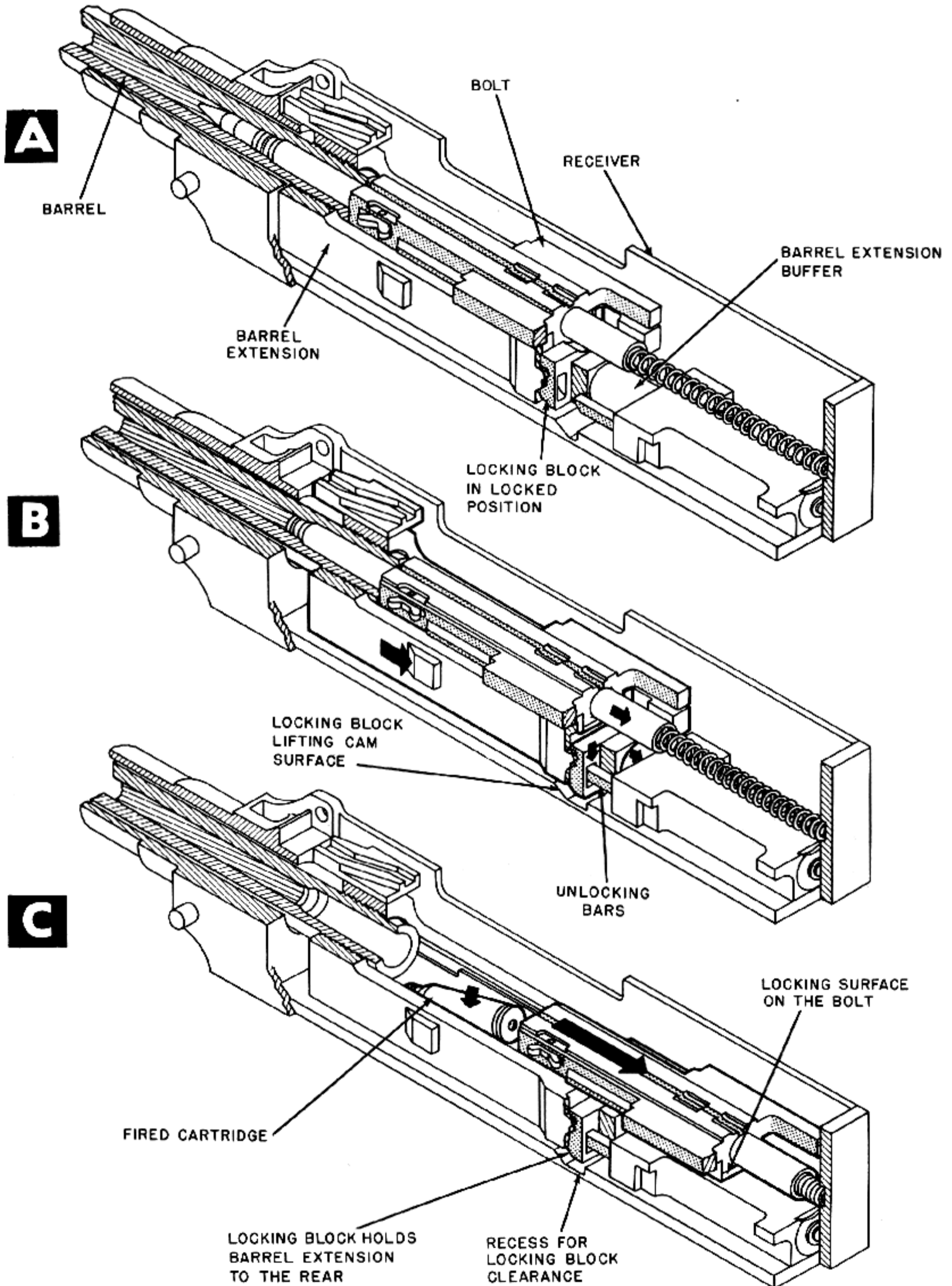


Figure 6-58. Recoiling Barrel Extension Forces Locking Block Over Unlocking Bars.



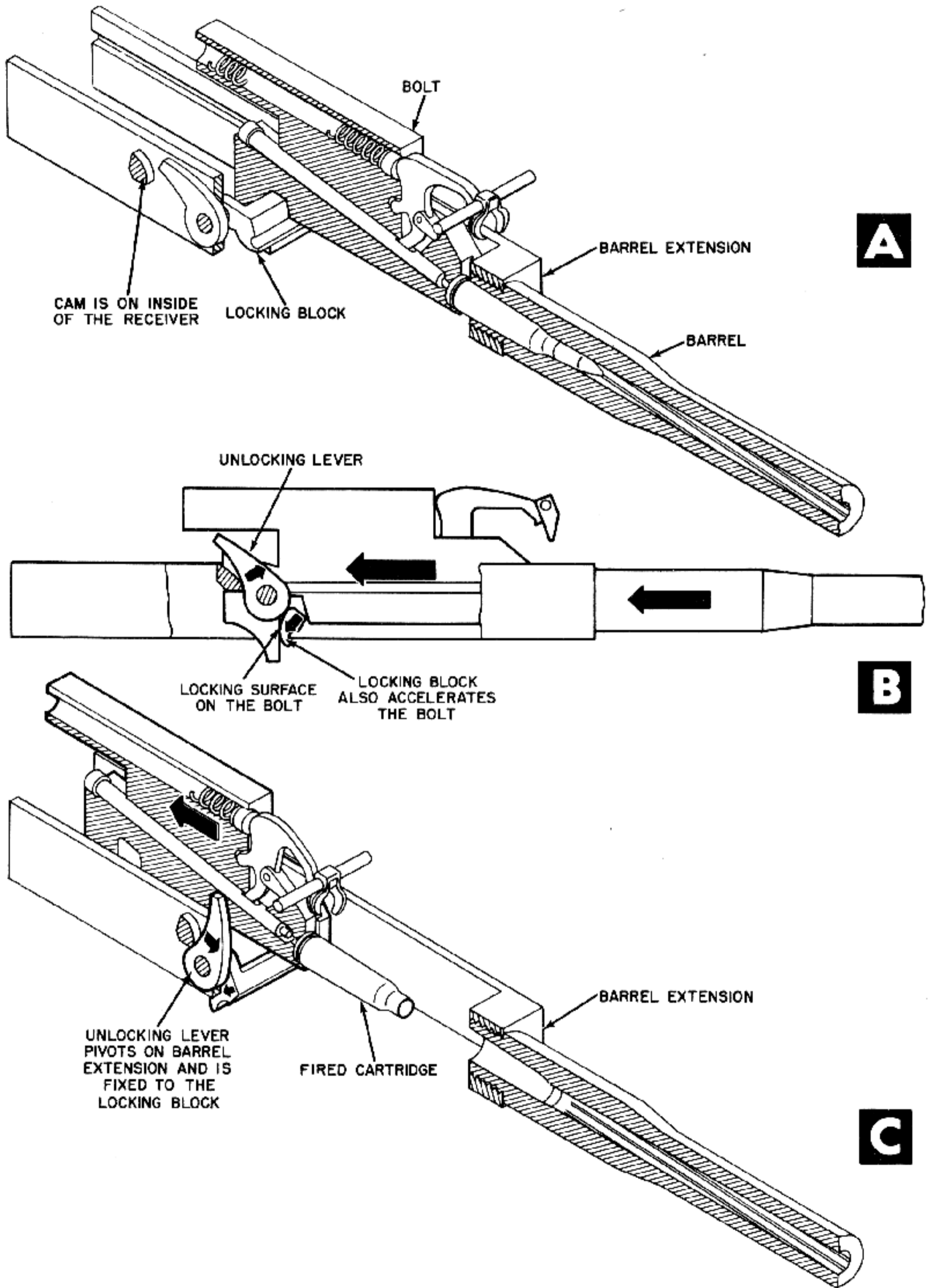


Figure 6-59. Locking Block Is Cammed Free of Bolt by Lugs on Inside of Receiver.

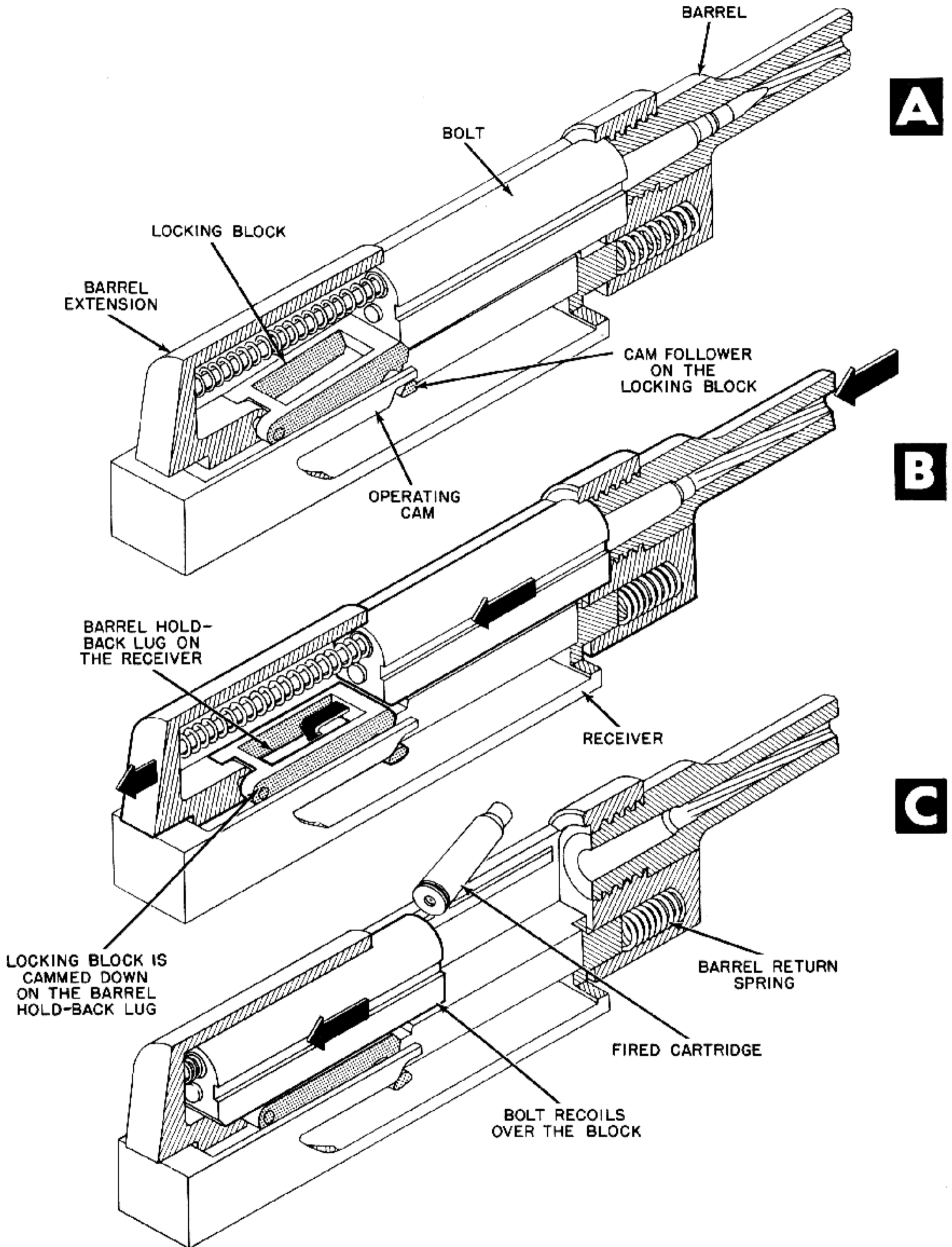


Figure 6-60. Groove in Receiver Cams Locking Block Free of Bolt.

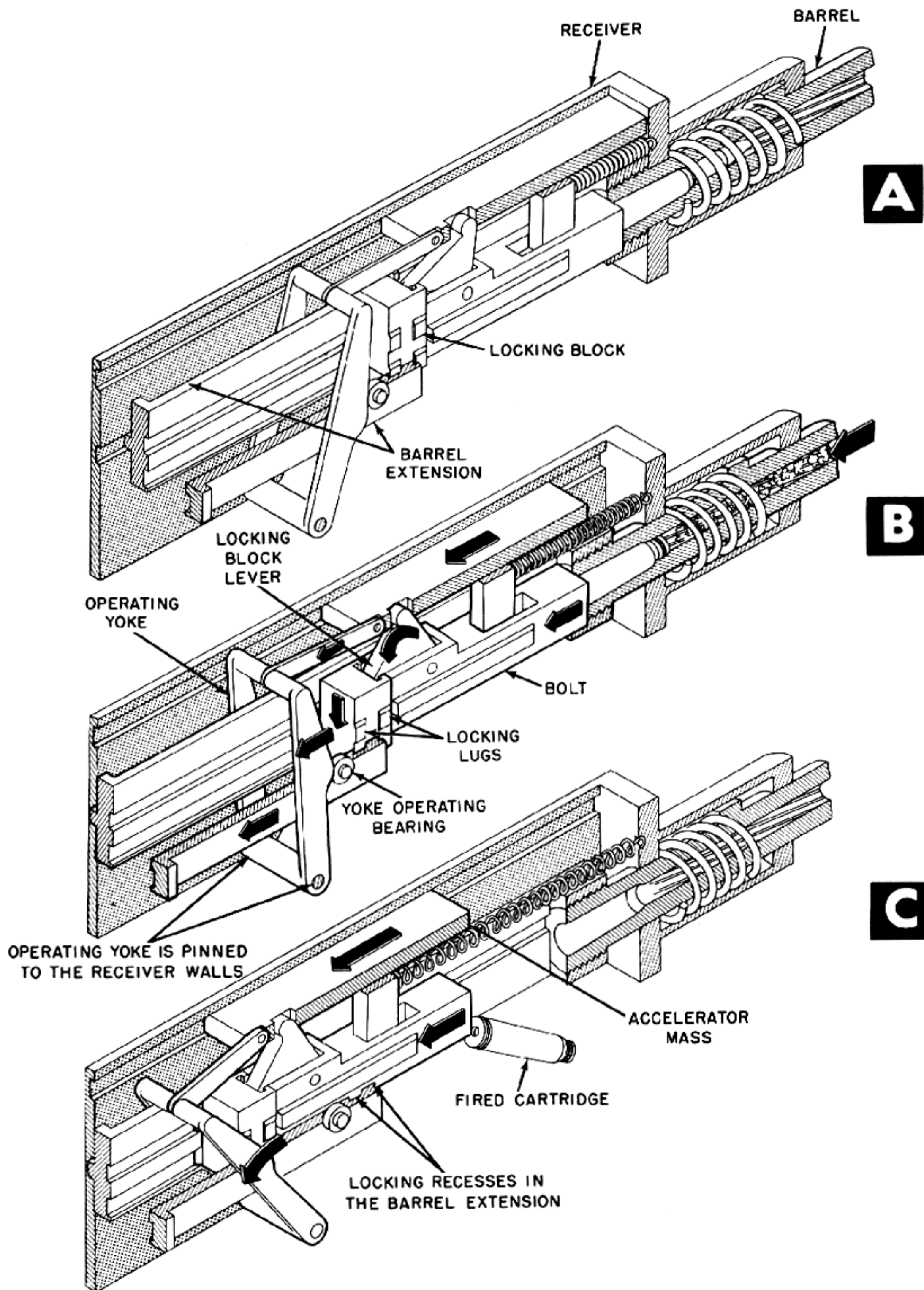


Figure 6-61. Recoiling Mass Cams Locking Block Free of Barrel Extension.



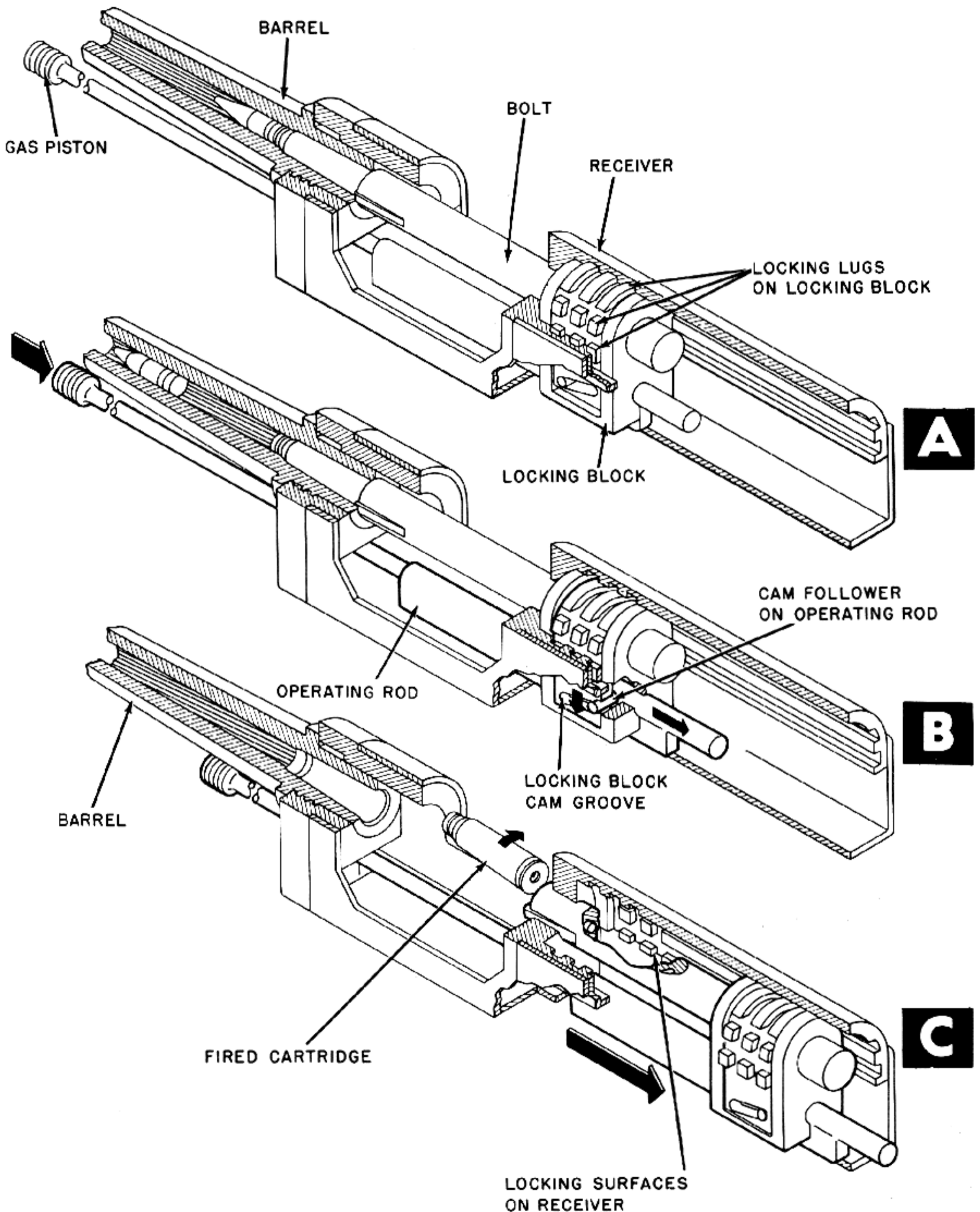


Figure 6-62. Operating Rod Cams Locking Block Free of Receiver.



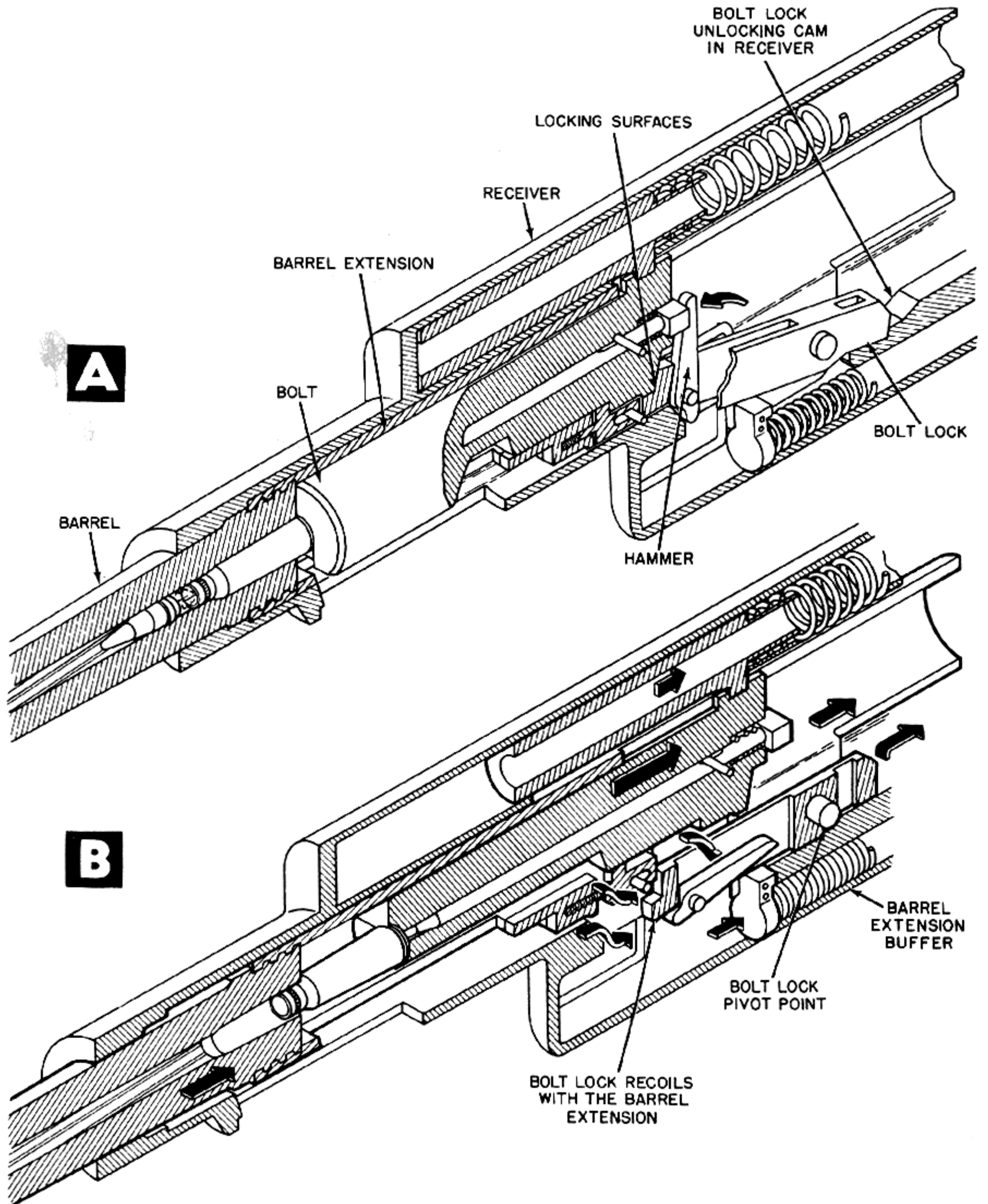
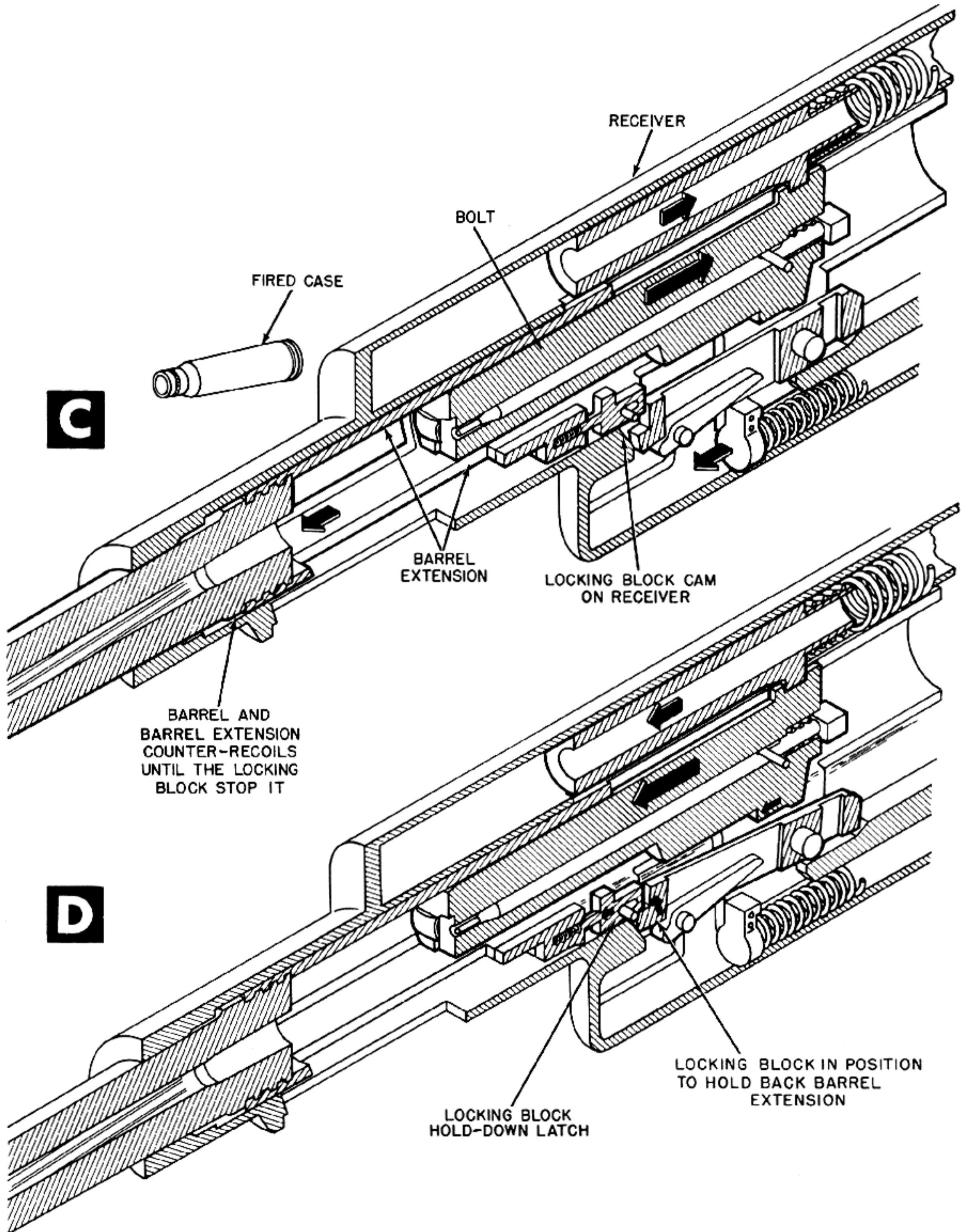


Figure 6-63. Barrel Extension Recoils, Camming



Locking Block Free of Bolt.



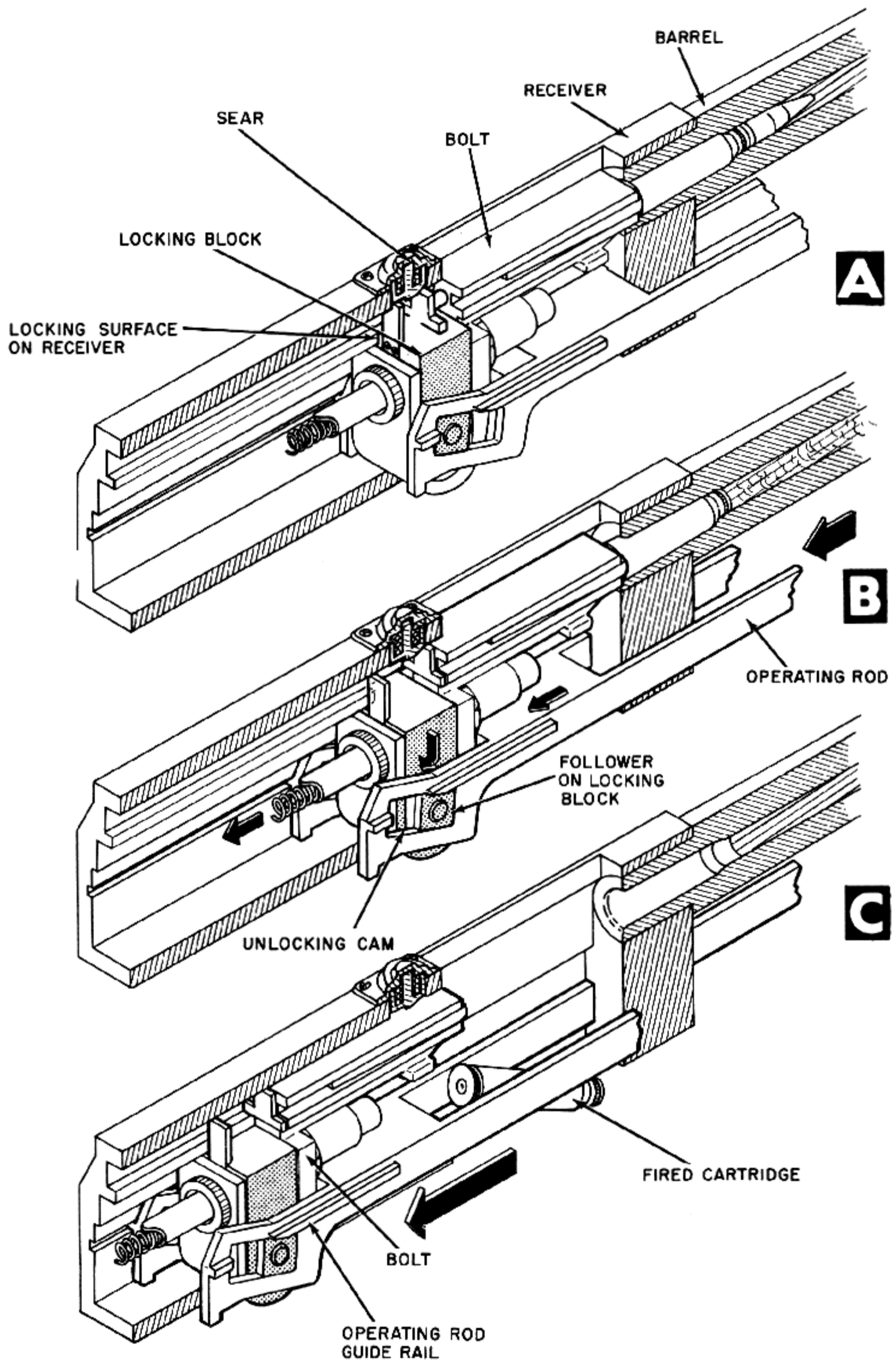


Figure 6-64. Operating Rod Cams Locking Block Free of Receiver.

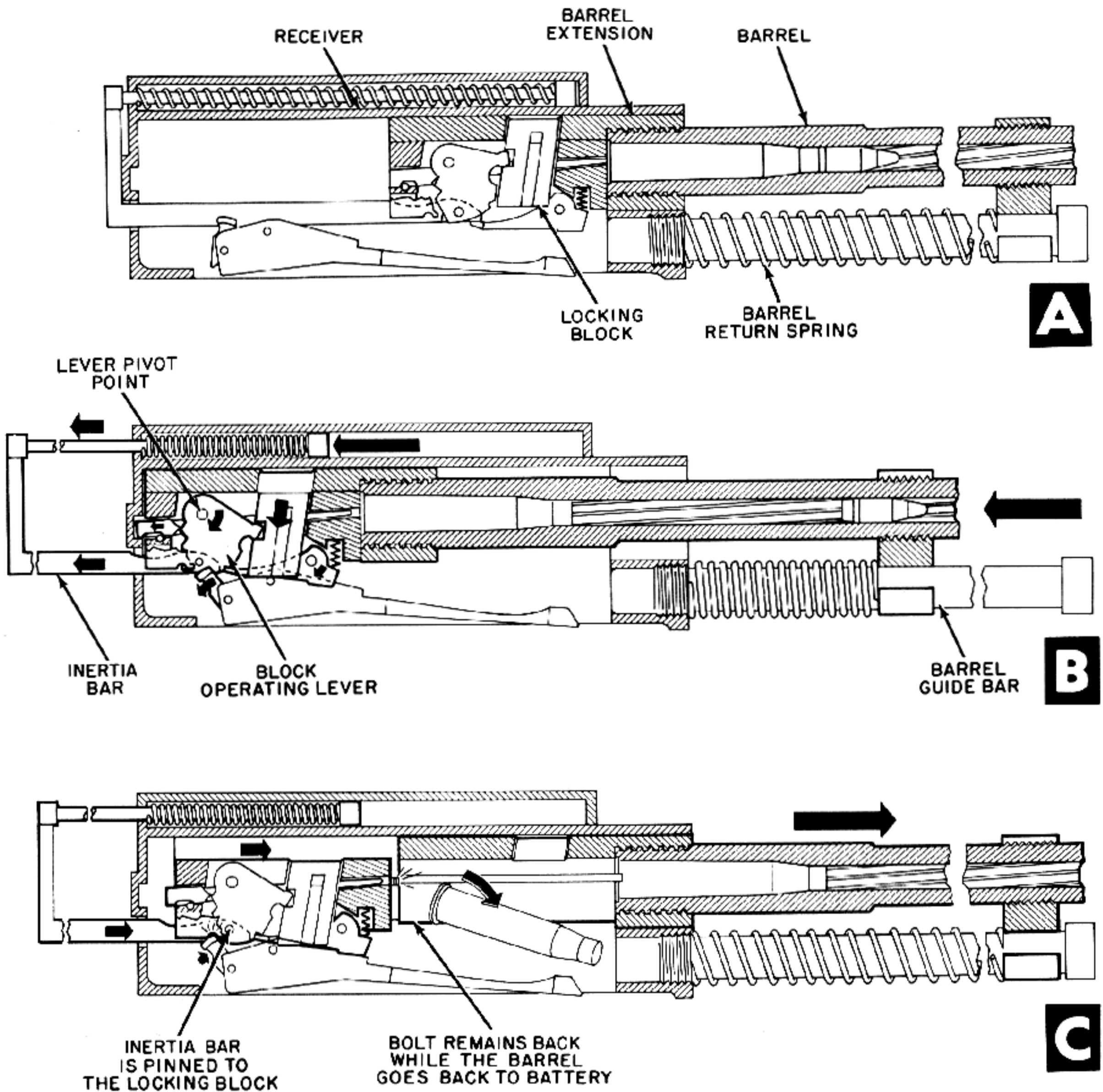


Figure 6-65. Locking Block Is Cammed Free of Barrel Extension by Motion of Inertia Bar.



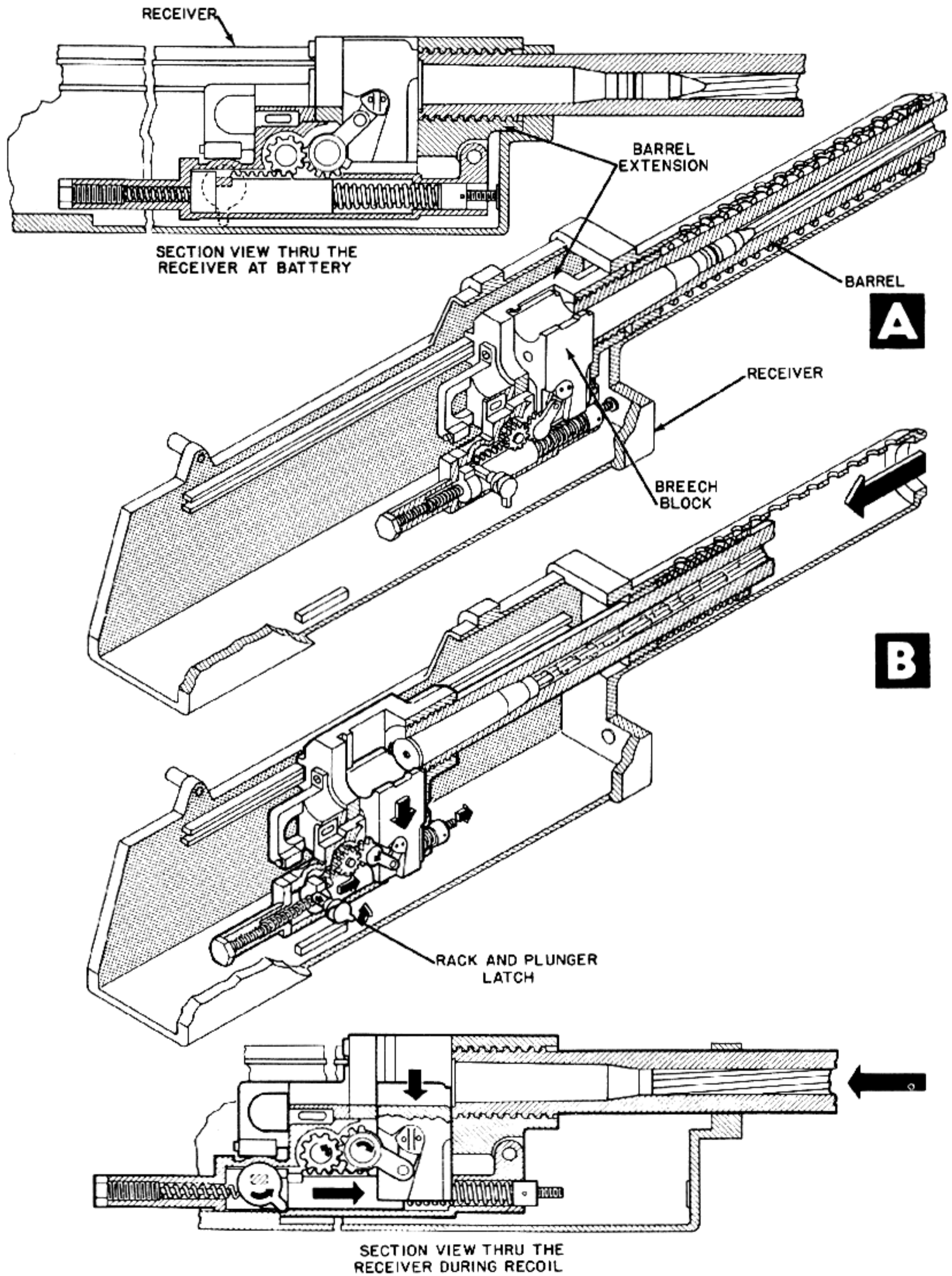
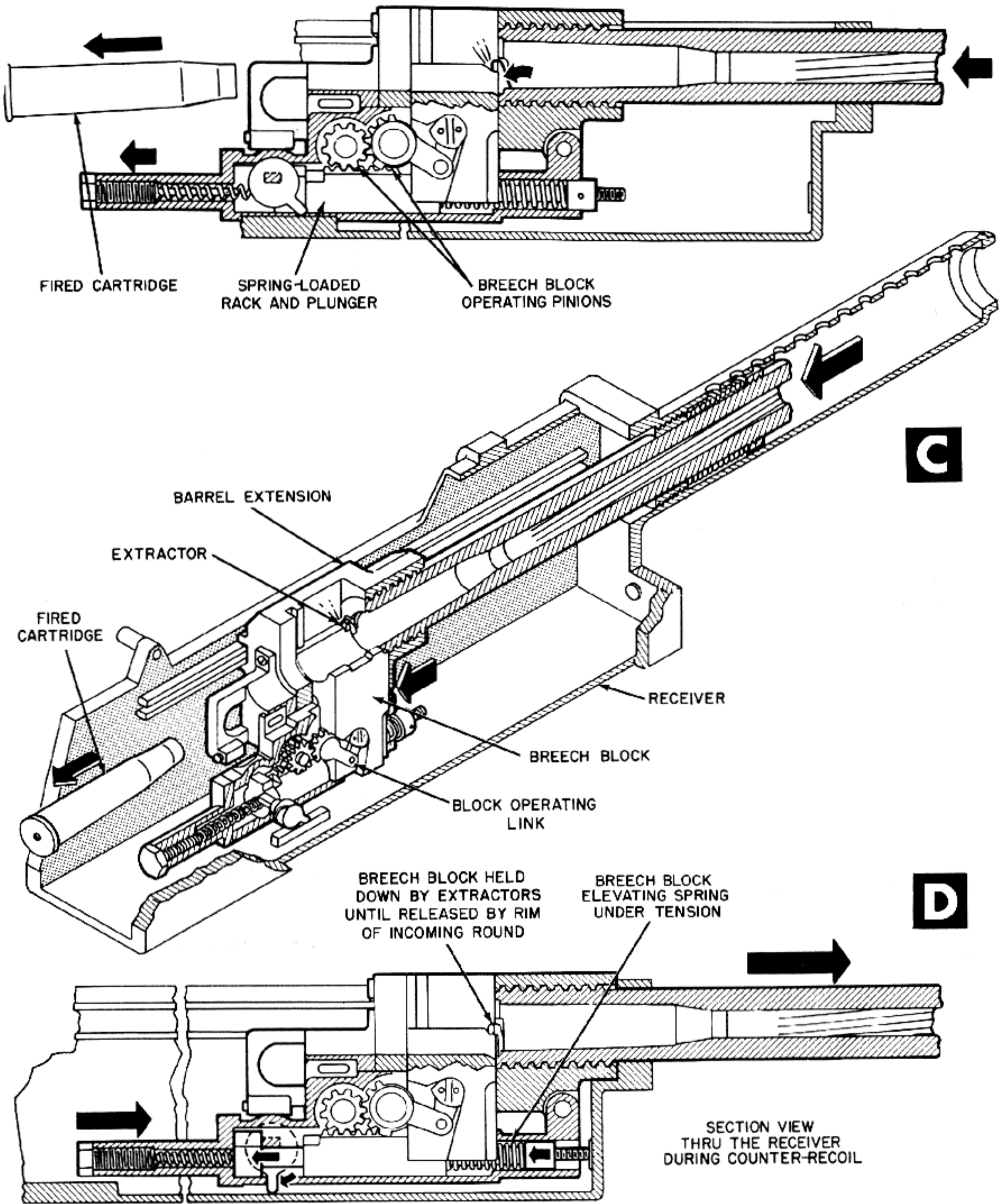


Figure 6-66. Breech Block Is Operated by



Spring-Loaded Rack and Pinion.

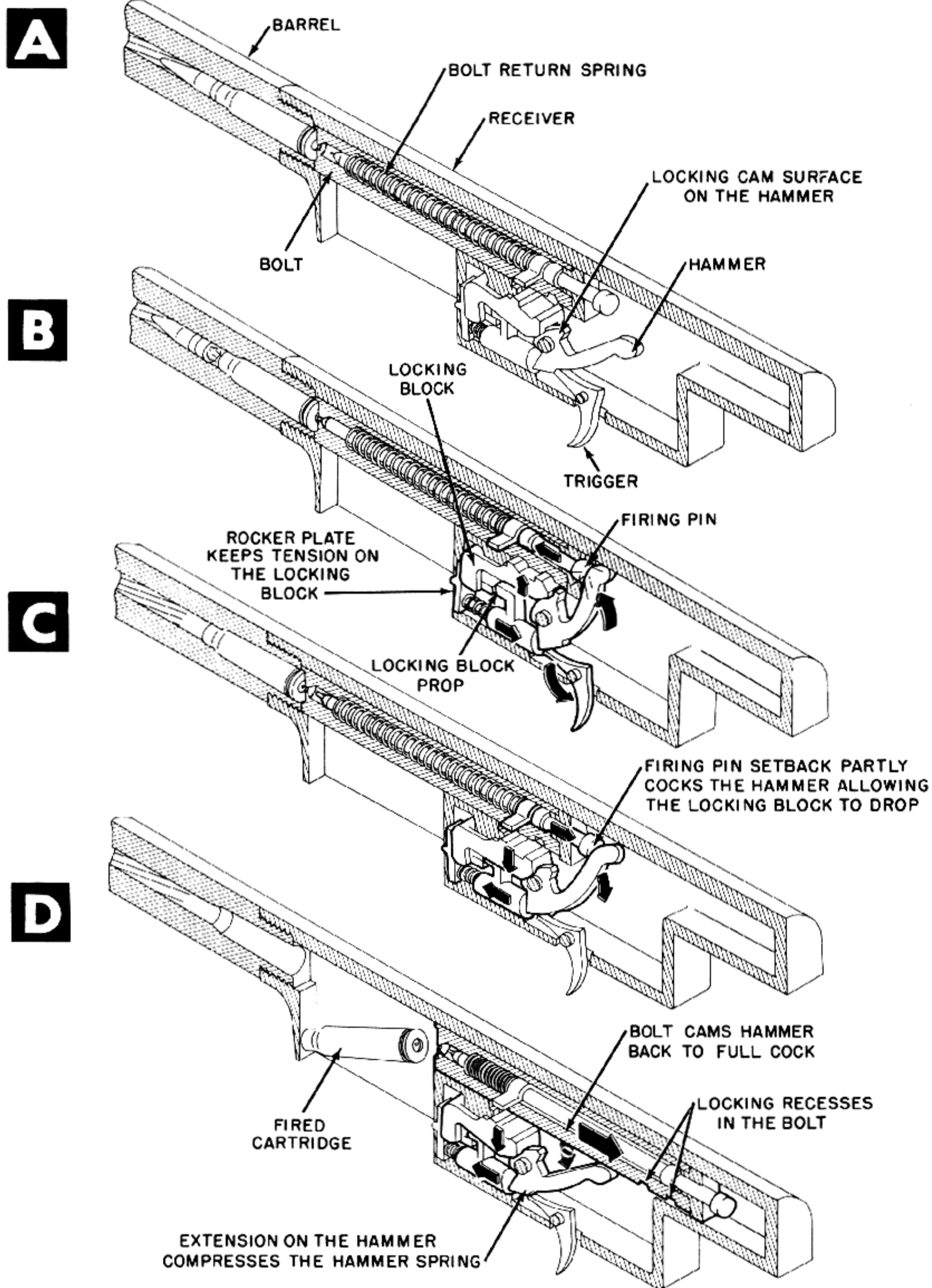


Figure 6-67. Bolt Is Locked by Action of Hammer on Locking Block.



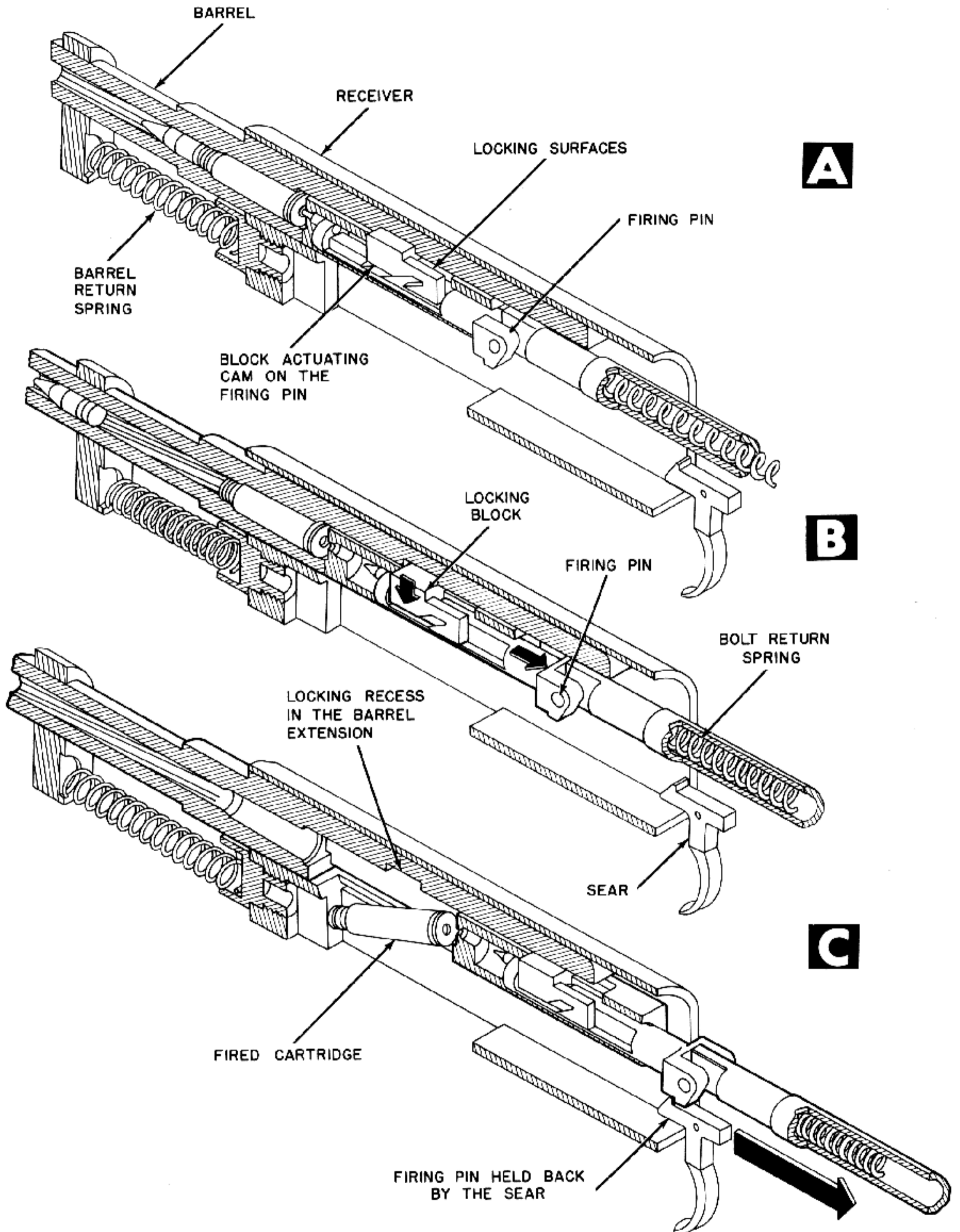


Figure 6-68. Firing Pin Recoils, Camming Locking Block Free of Barrel Extension.



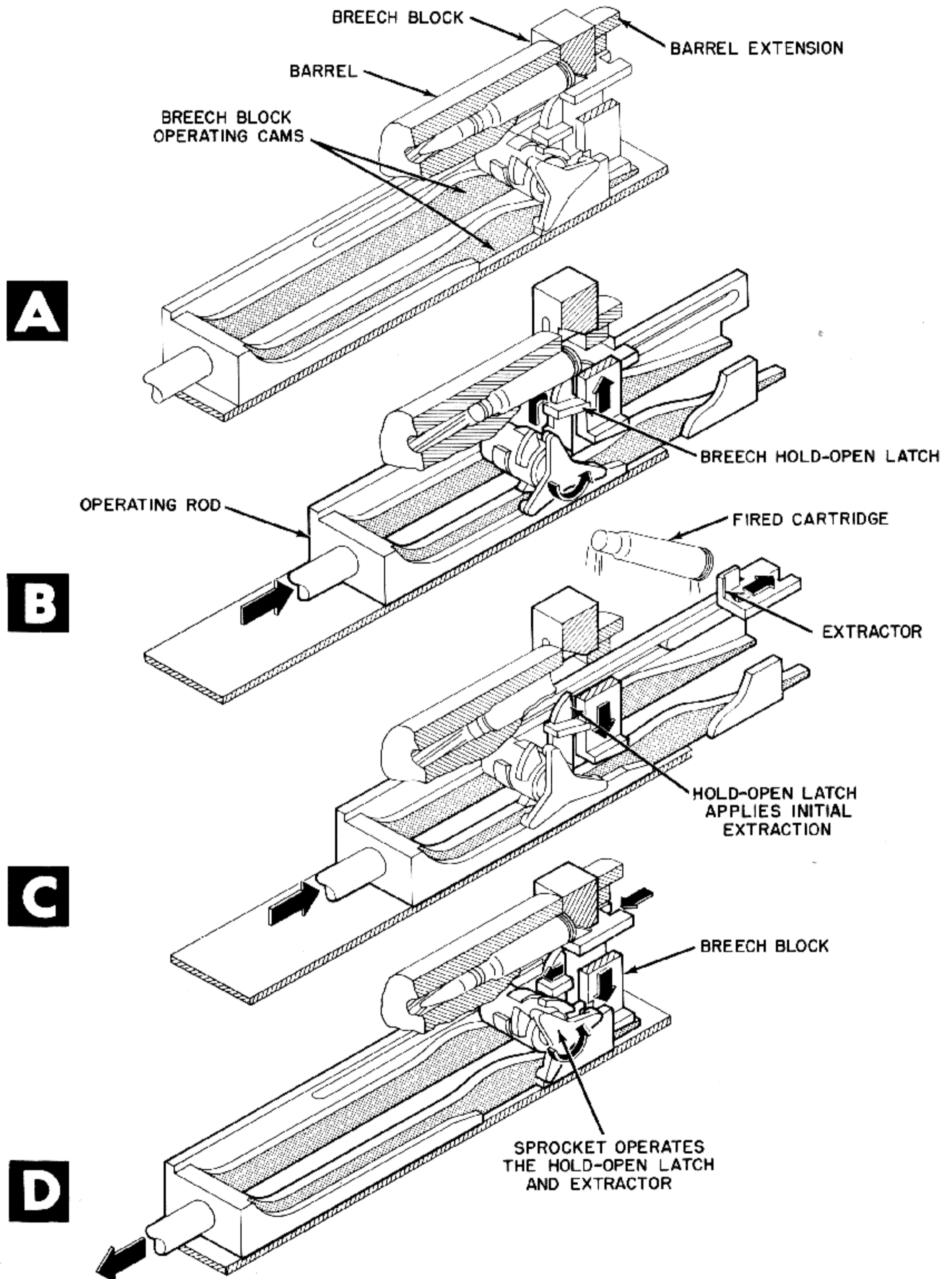


Figure 6-69. Cams on Operating Rod Actuate Breech Block.

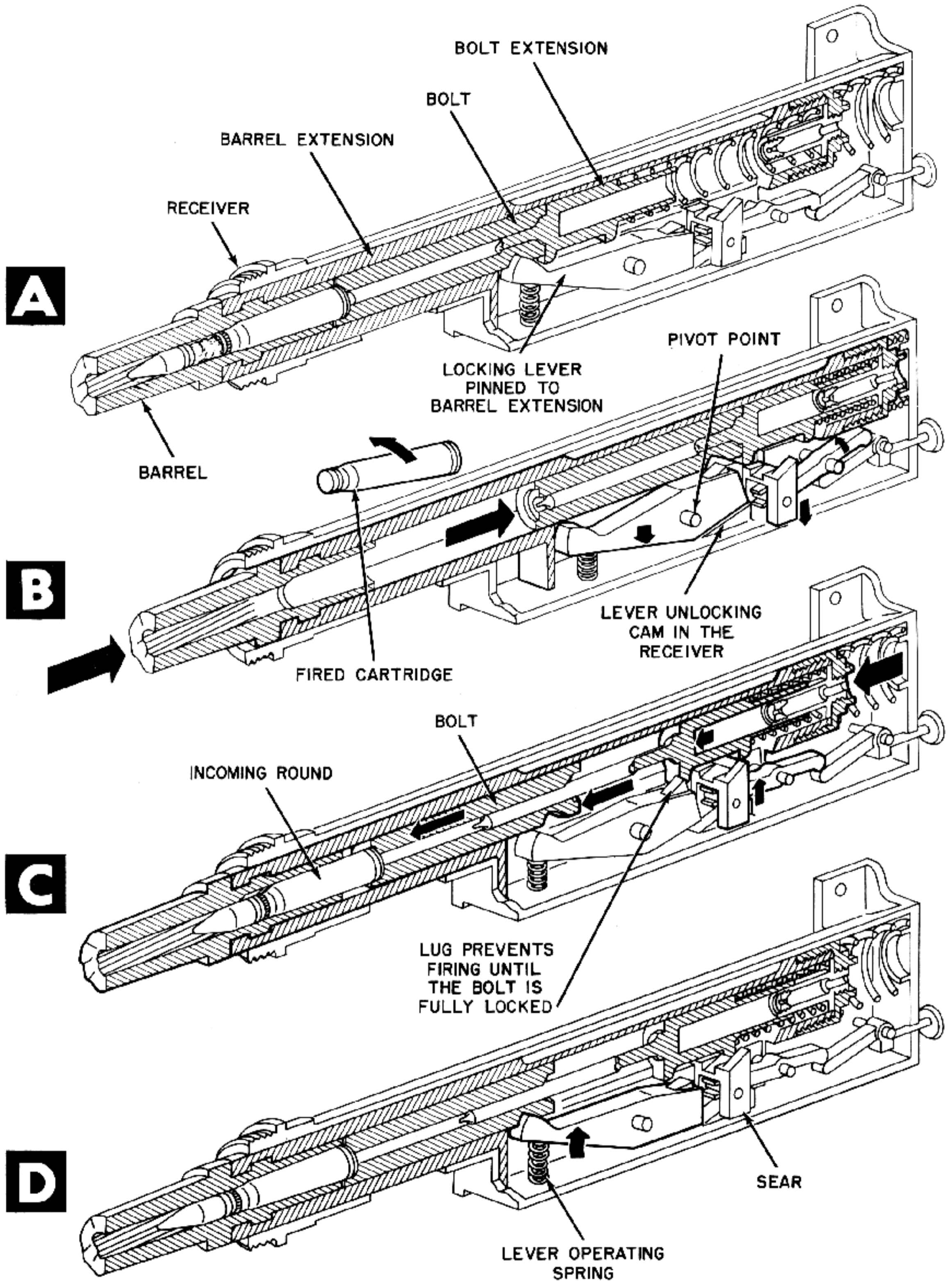


Figure 6-70. Barrel Extension Recoils, Camming Locking Lever Free of the Bolt.

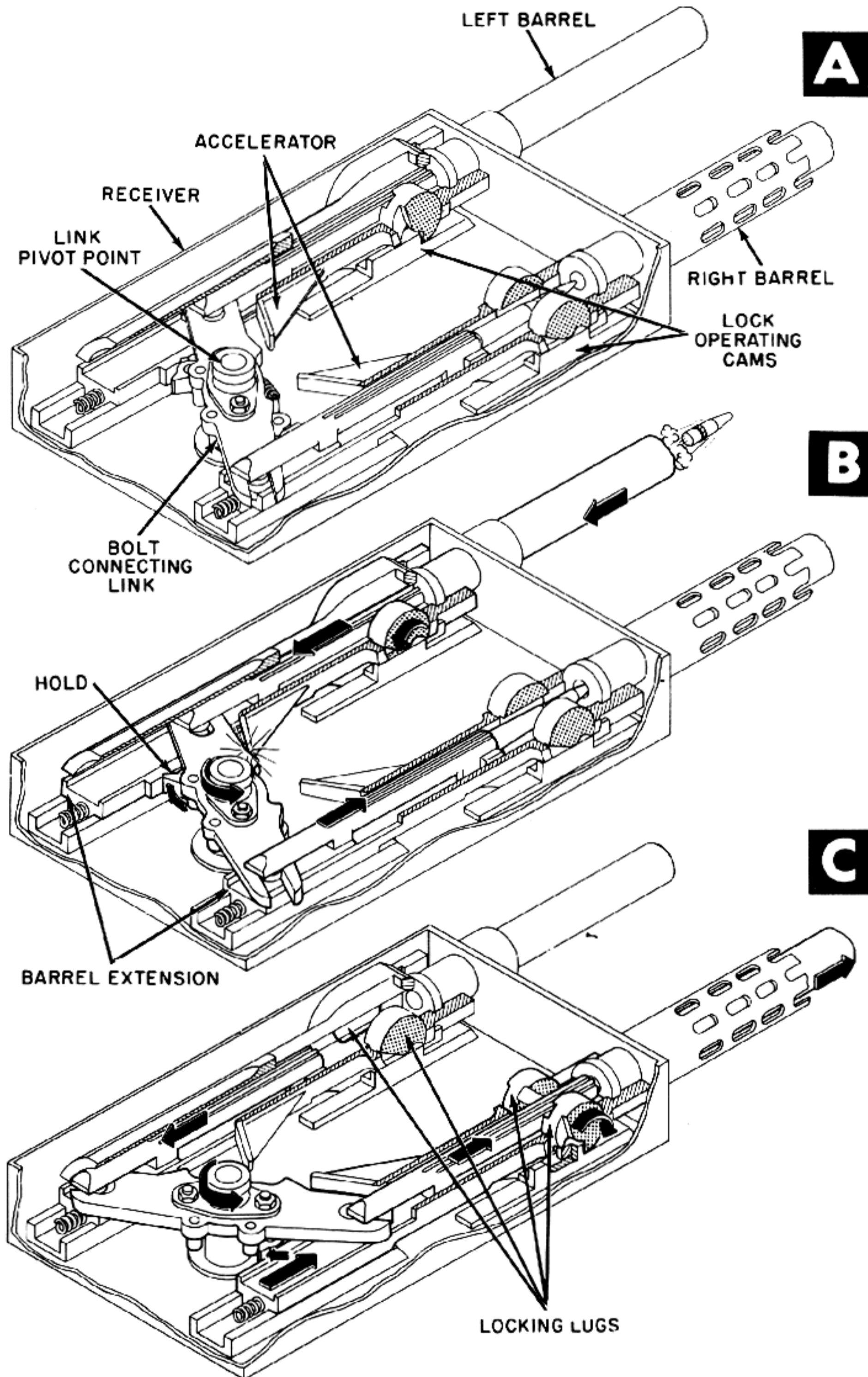


Figure 6-71. Double Barrel Gun. Barrel Extension Recoils, Unlocking Rotary Locking Blocks.



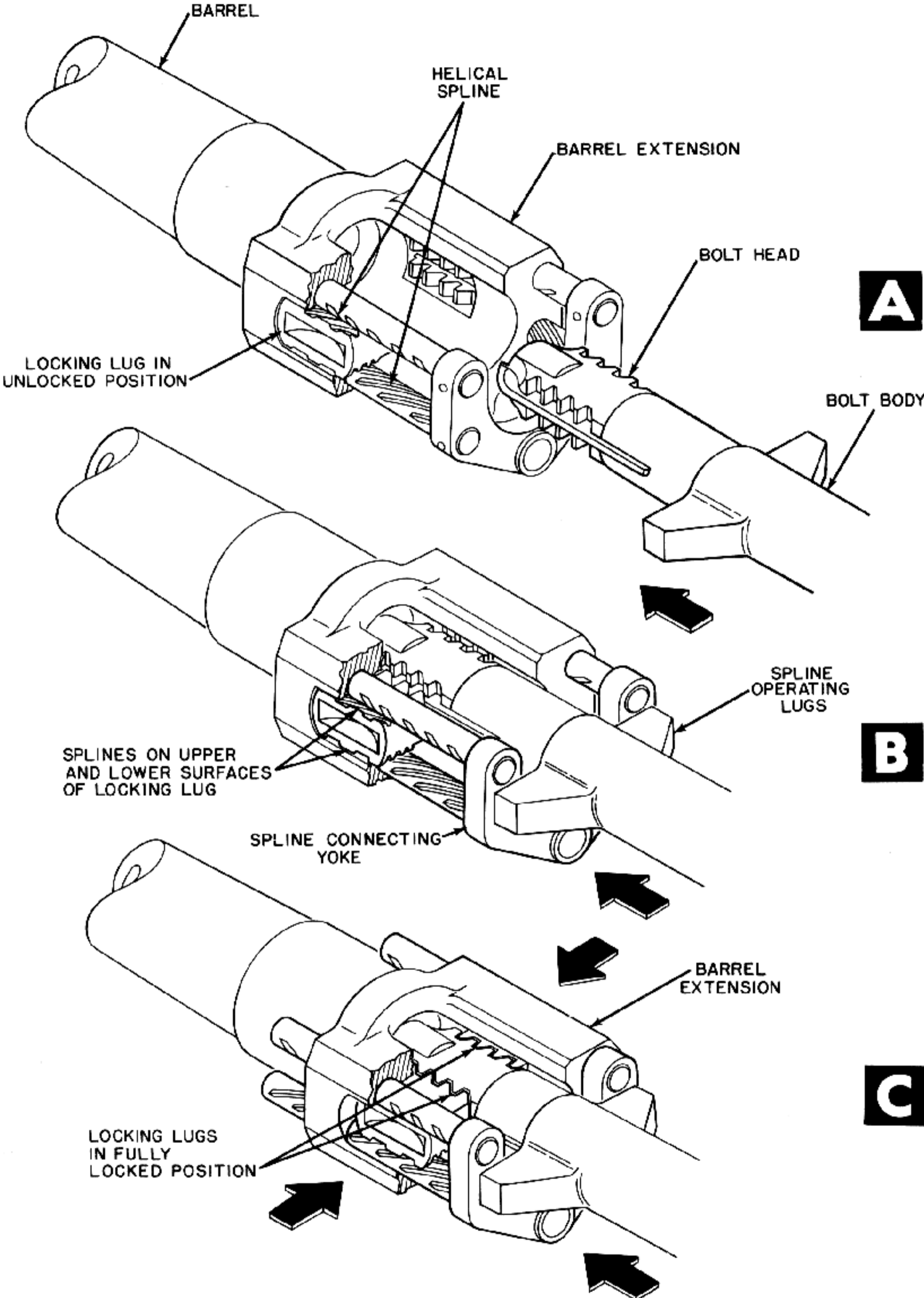


Figure 6-72. Helical Splines in Barrel Extension Lock Bolt by Pressure of Bolt Extension.

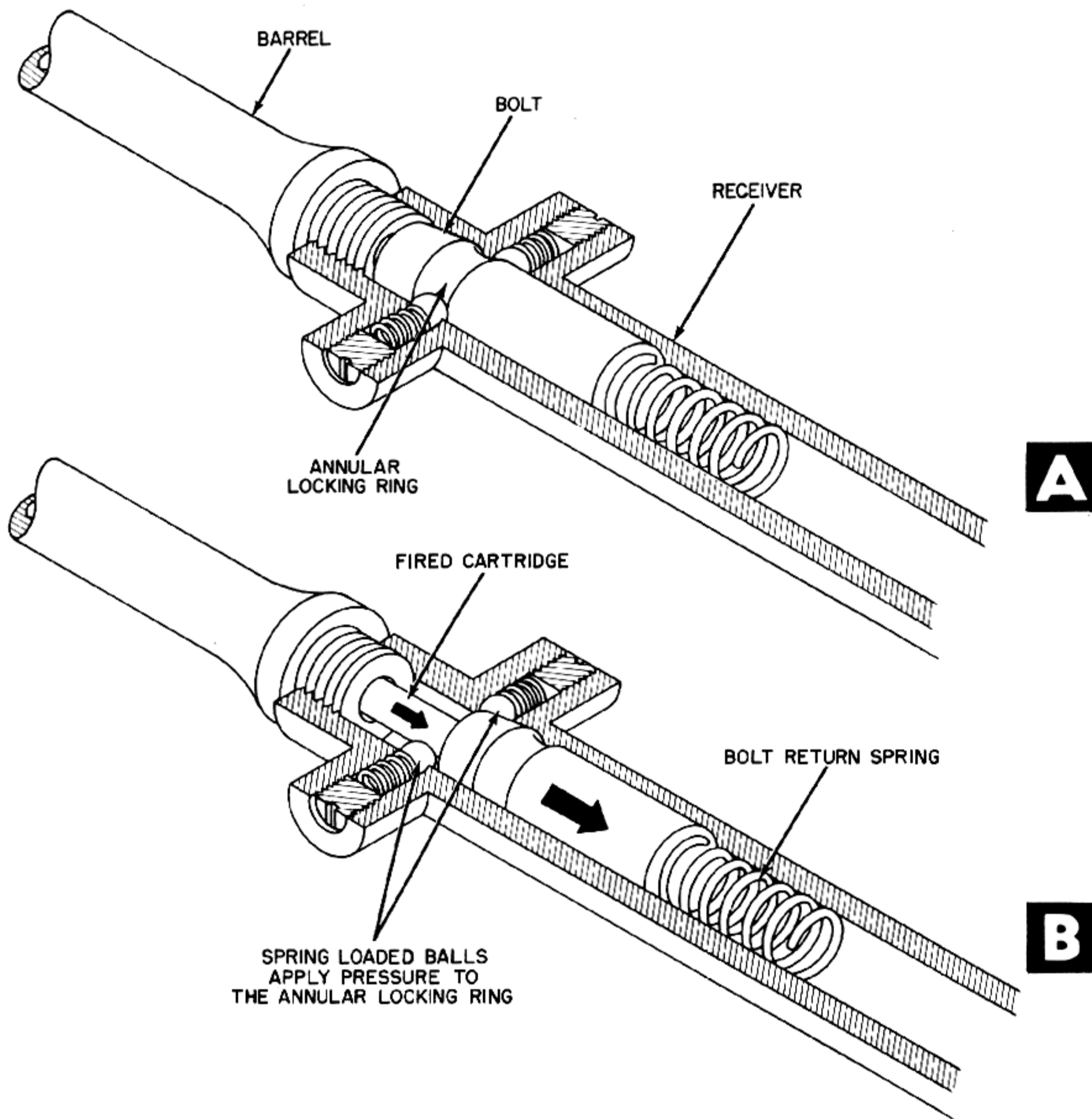


Figure 6-73. Spring-Loaded Balls Retard Recoil of Bolt.

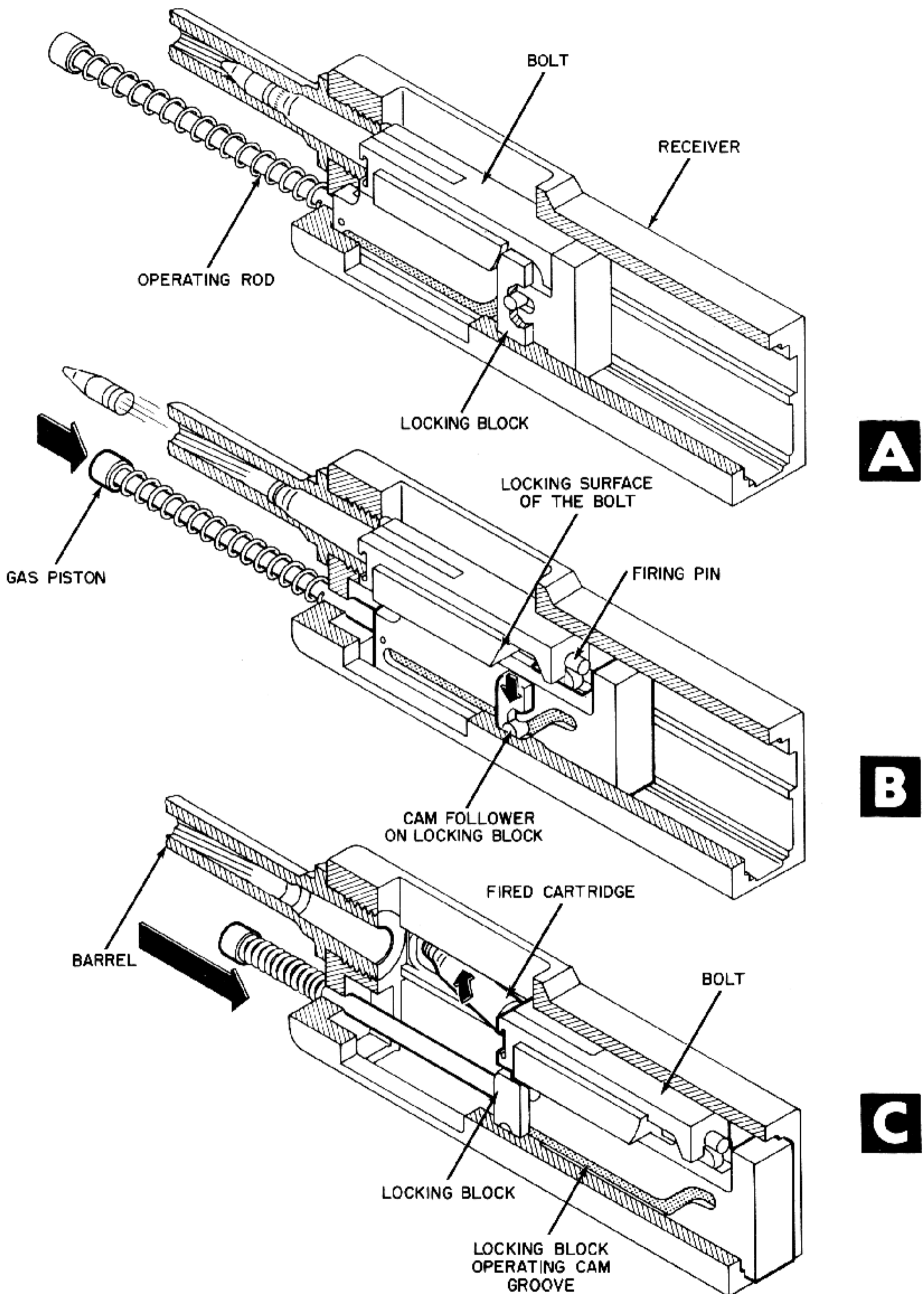
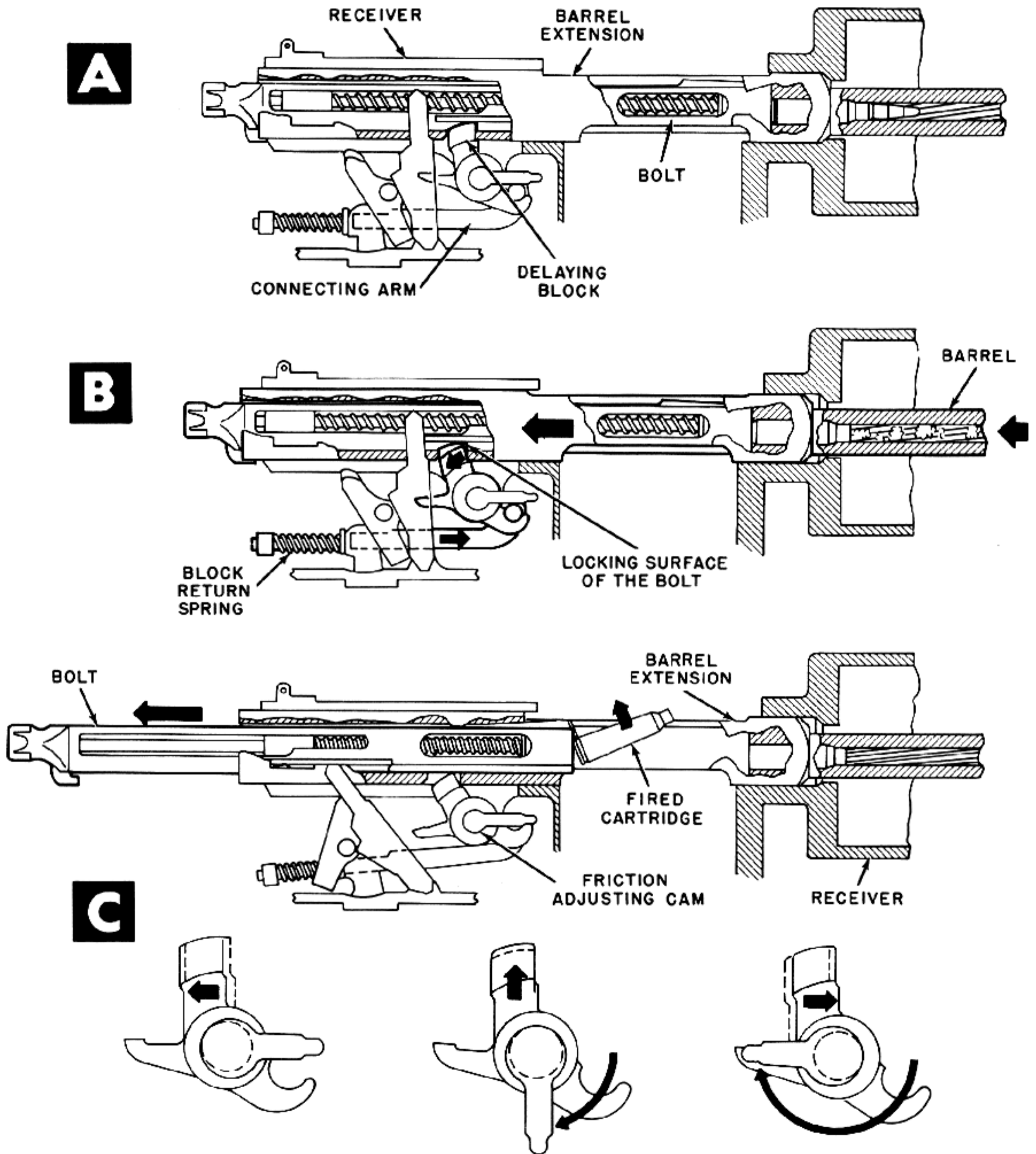


Figure 6-74. Cam on Operating Rod Actuates Locking Block.





ROTATING CAM RAISES OR LOWERS THE DELAYING BLOCK  
INCREASING OR DECREASING THE FRICTION ON THE BOLT

Figure 6-75. Spring-Loaded Locking Block Retards Recoil of Bolt.

F. Cammed Locking Lug

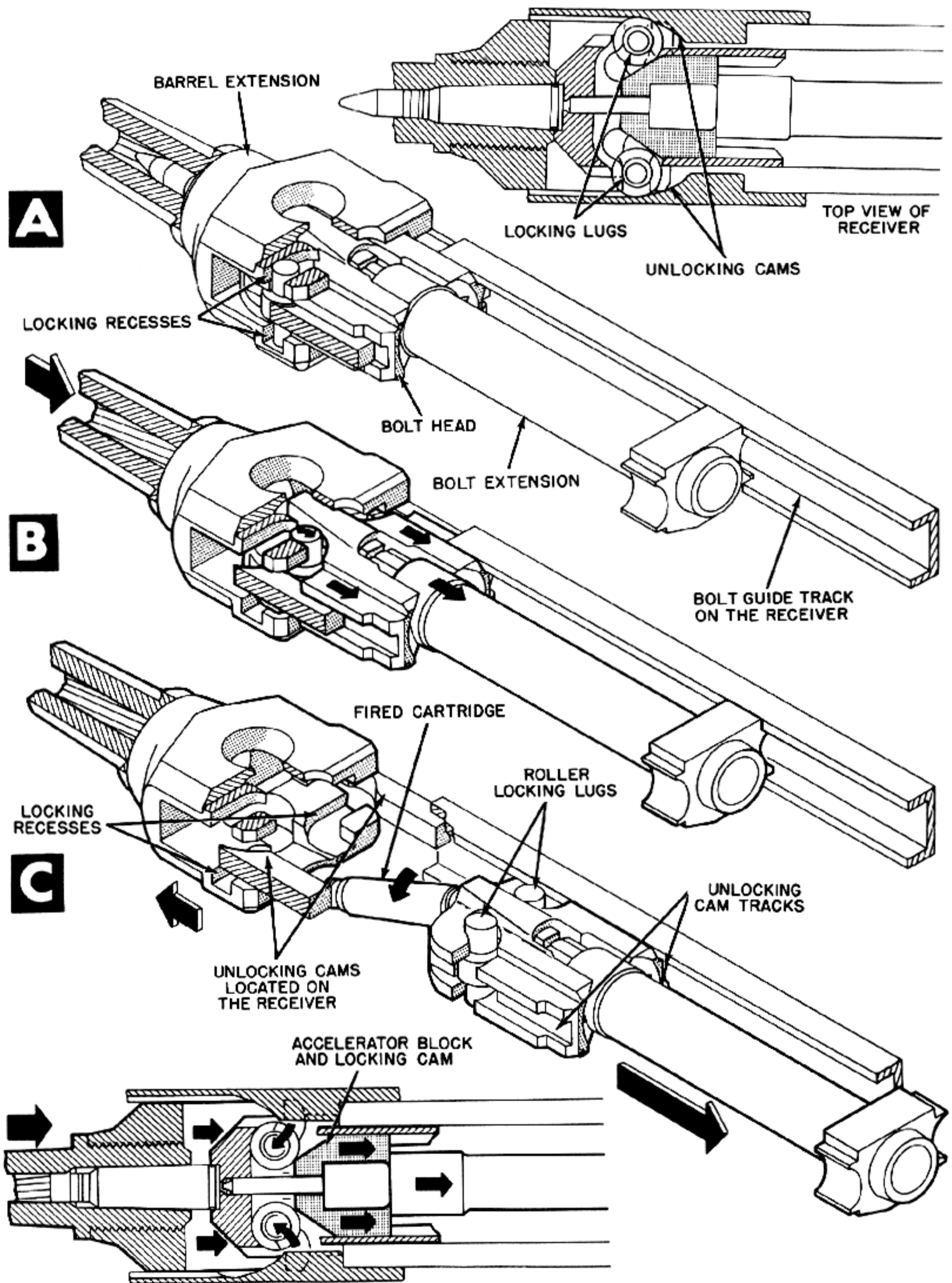


Figure 6-76. Locking Rollers Are Cammed Free of Barrel Extension by Rails in Receiver.

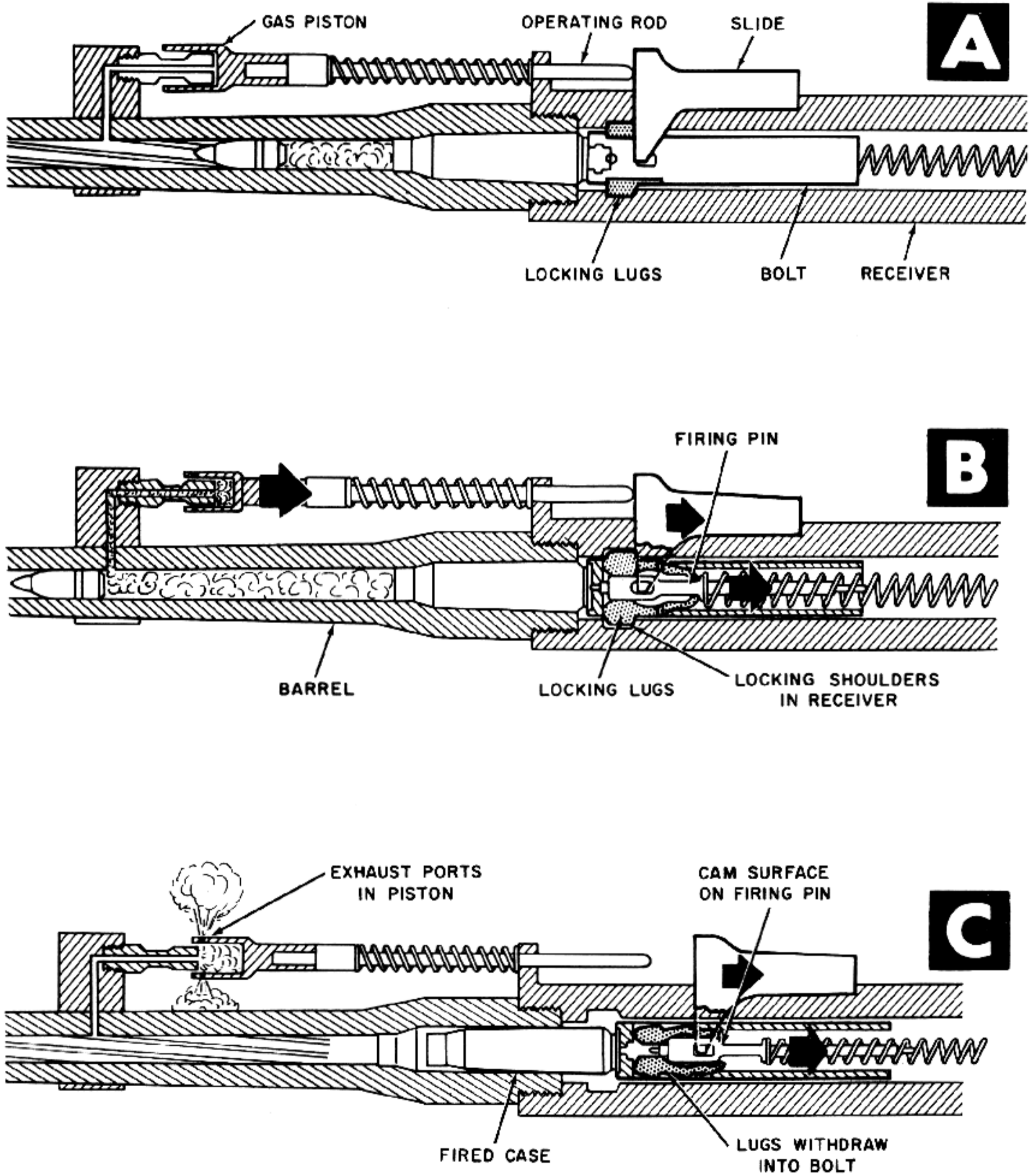


Figure 6-77. Cammed Surface on Firing Pin Unlocks Lugs From Receiver.



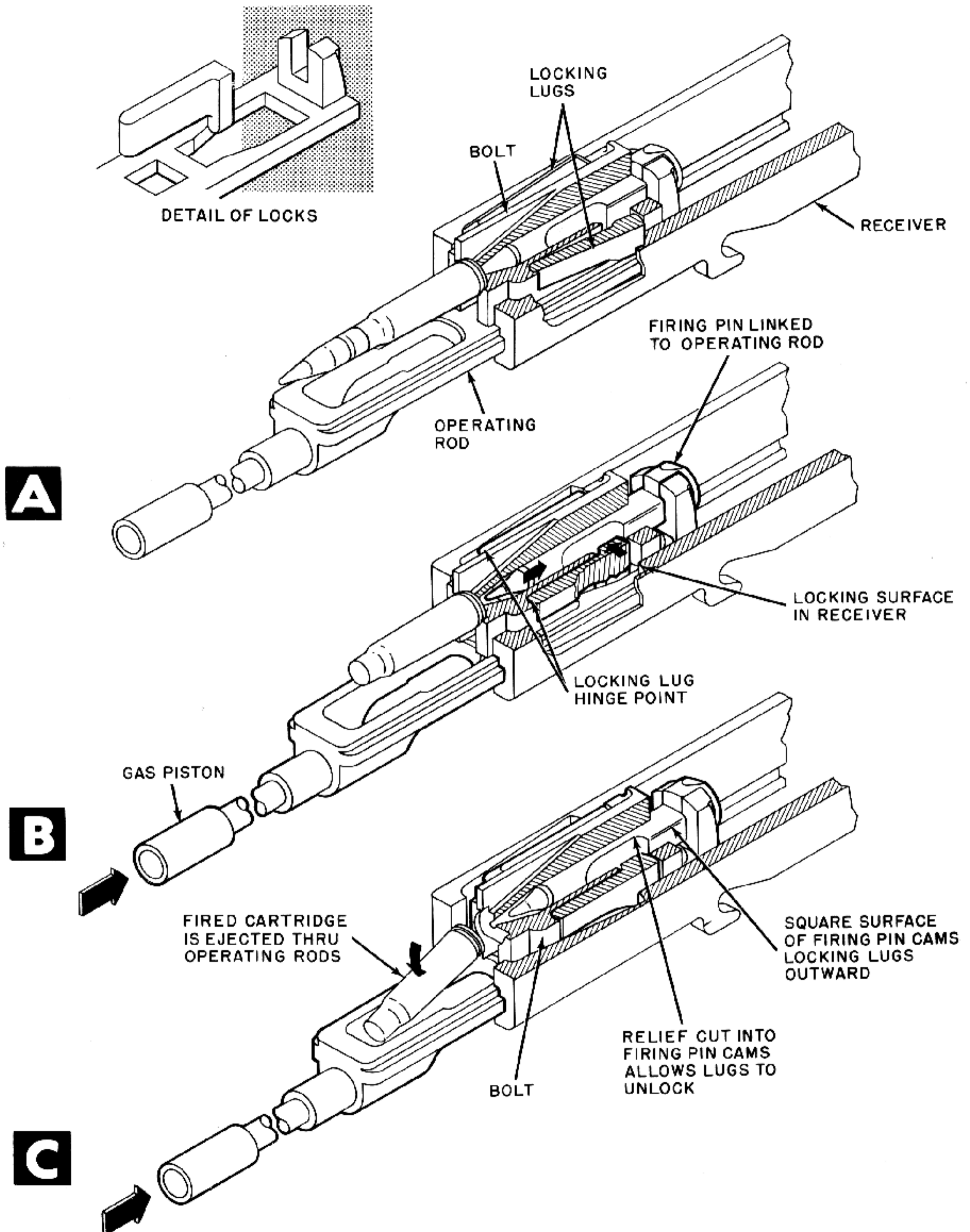


Figure 6-78. Cammed Surface on Operating Rod Unlocks Lugs From Receiver.



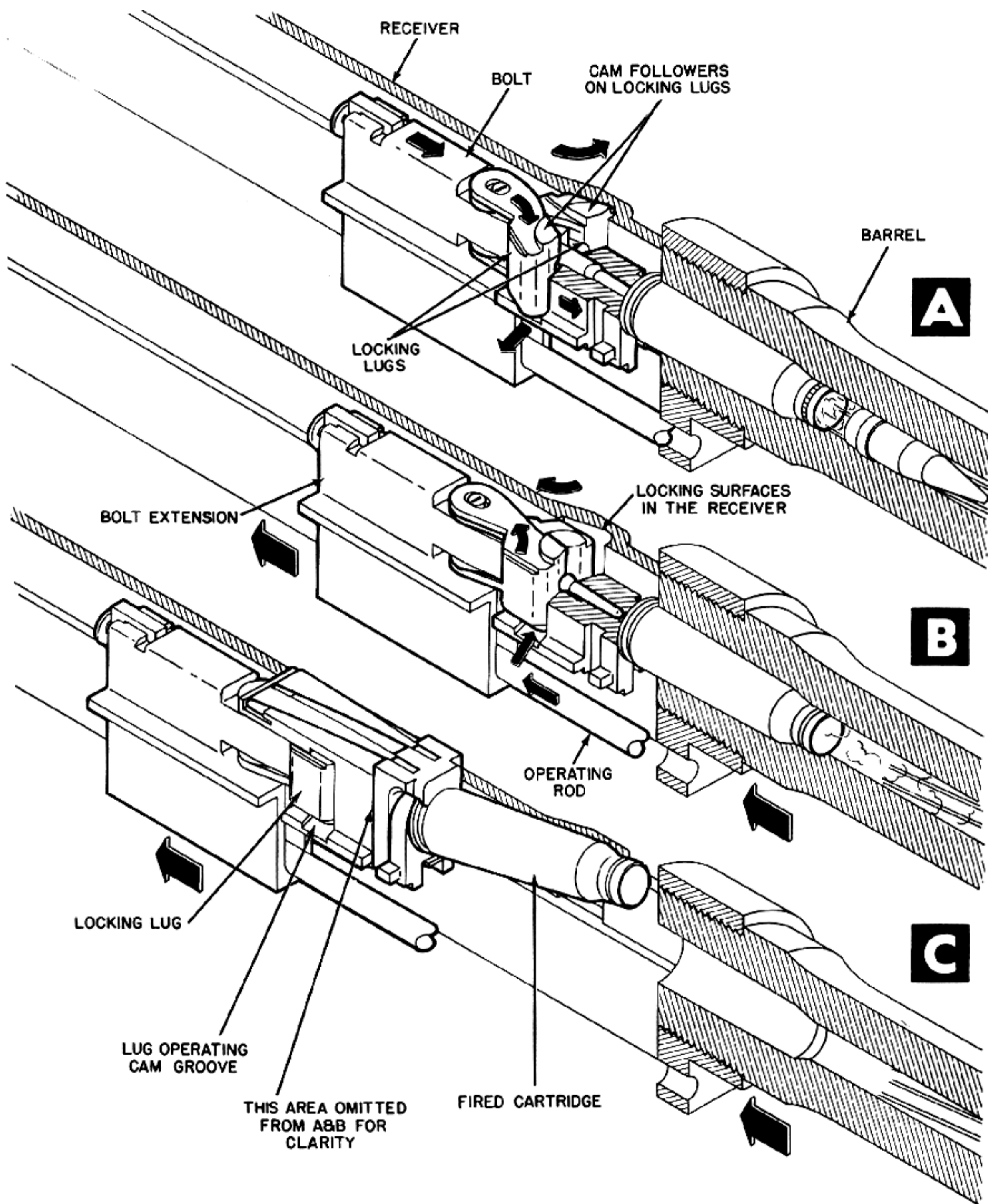


Figure 6-79. Recoiling Bolt Extension Cams Locking Lugs Free of Receiver.

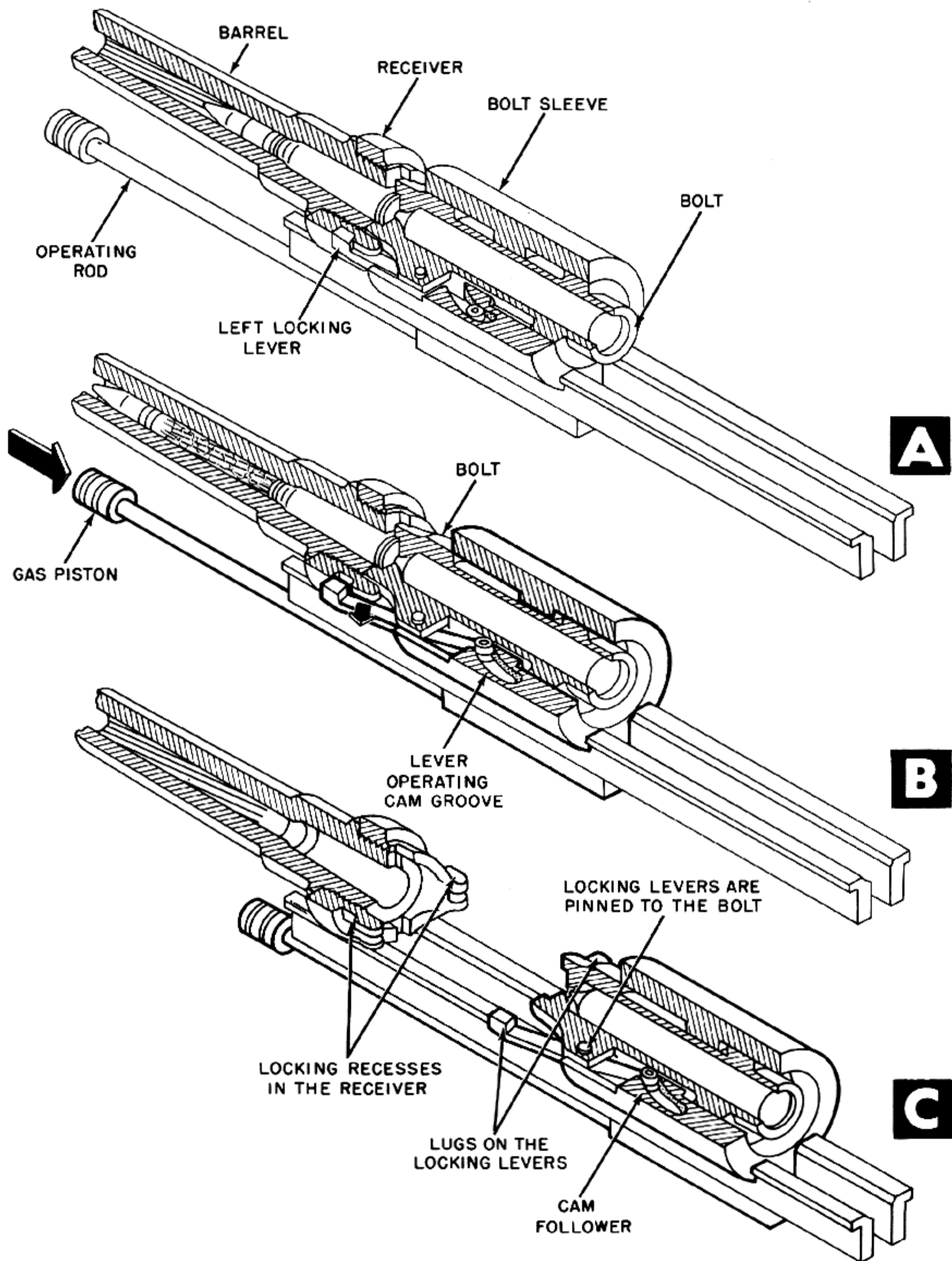


Figure 6-80. Recoiling Bolt Sleeve Cams Pivoted Locking Levers Free of Receiver.

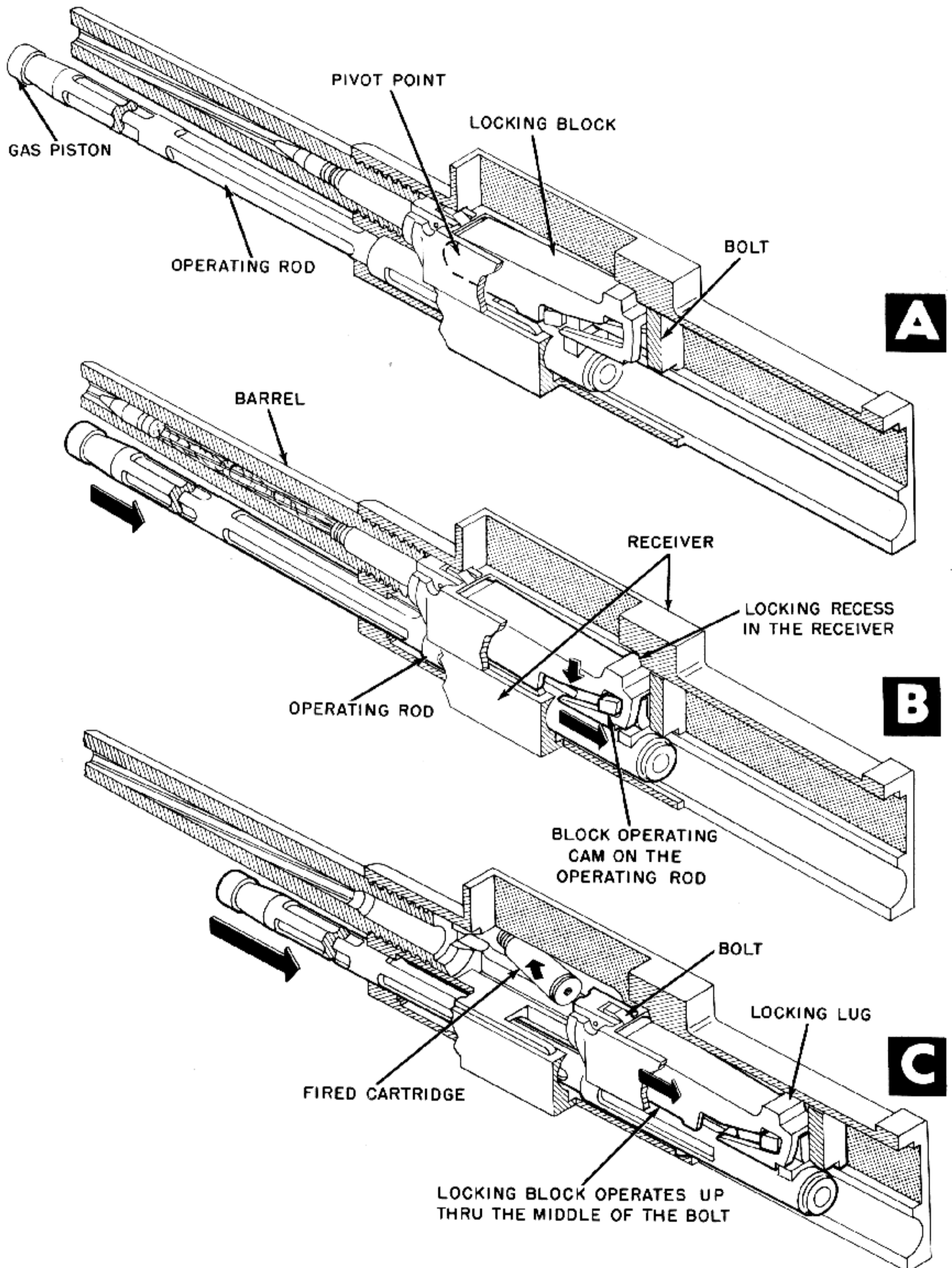


Figure 6-81. Lug on Operating Rod Cams Locking Block Free of Receiver.



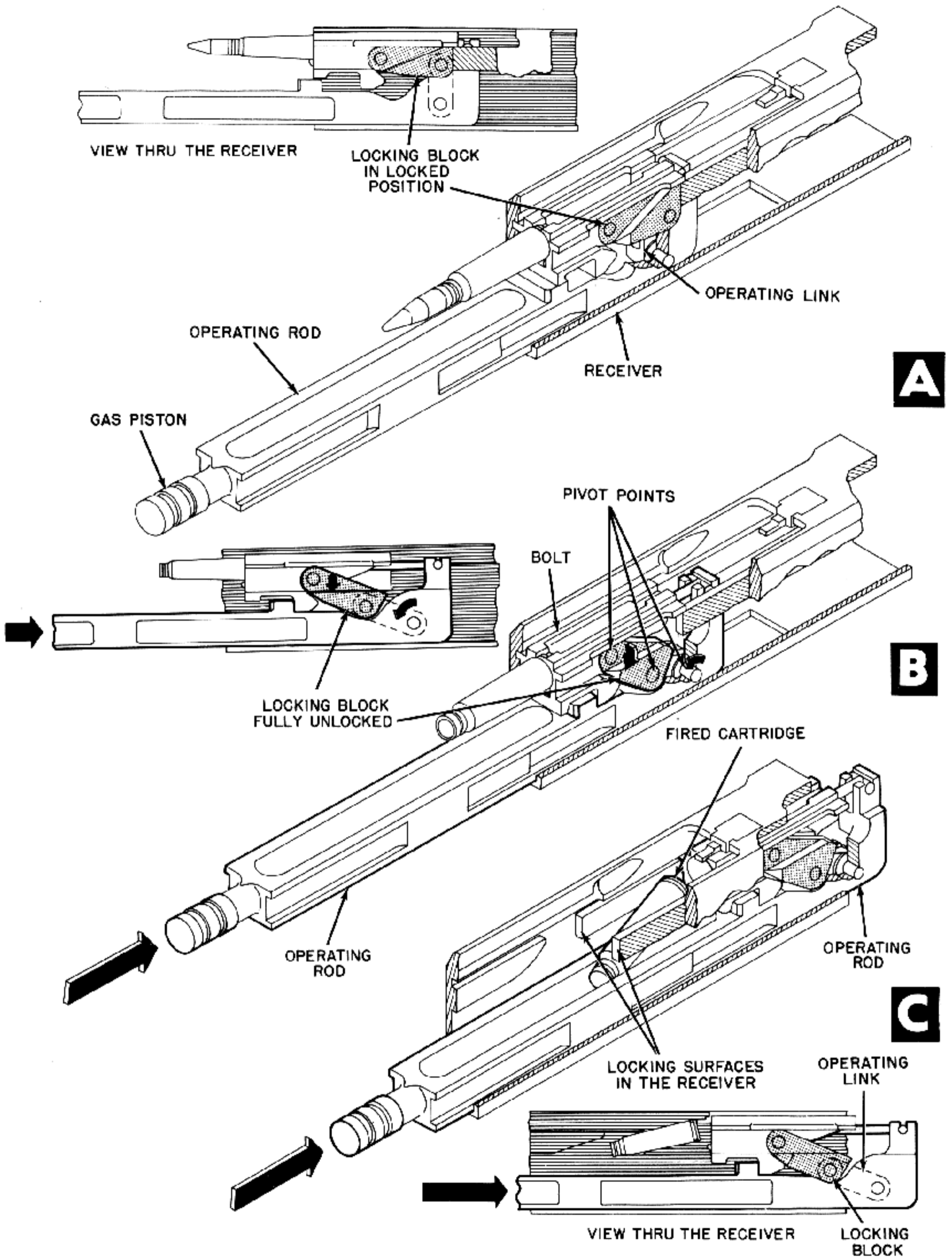


Figure 6-82. Link on Operating Rod Pulls Locking Block Free of Receiver.

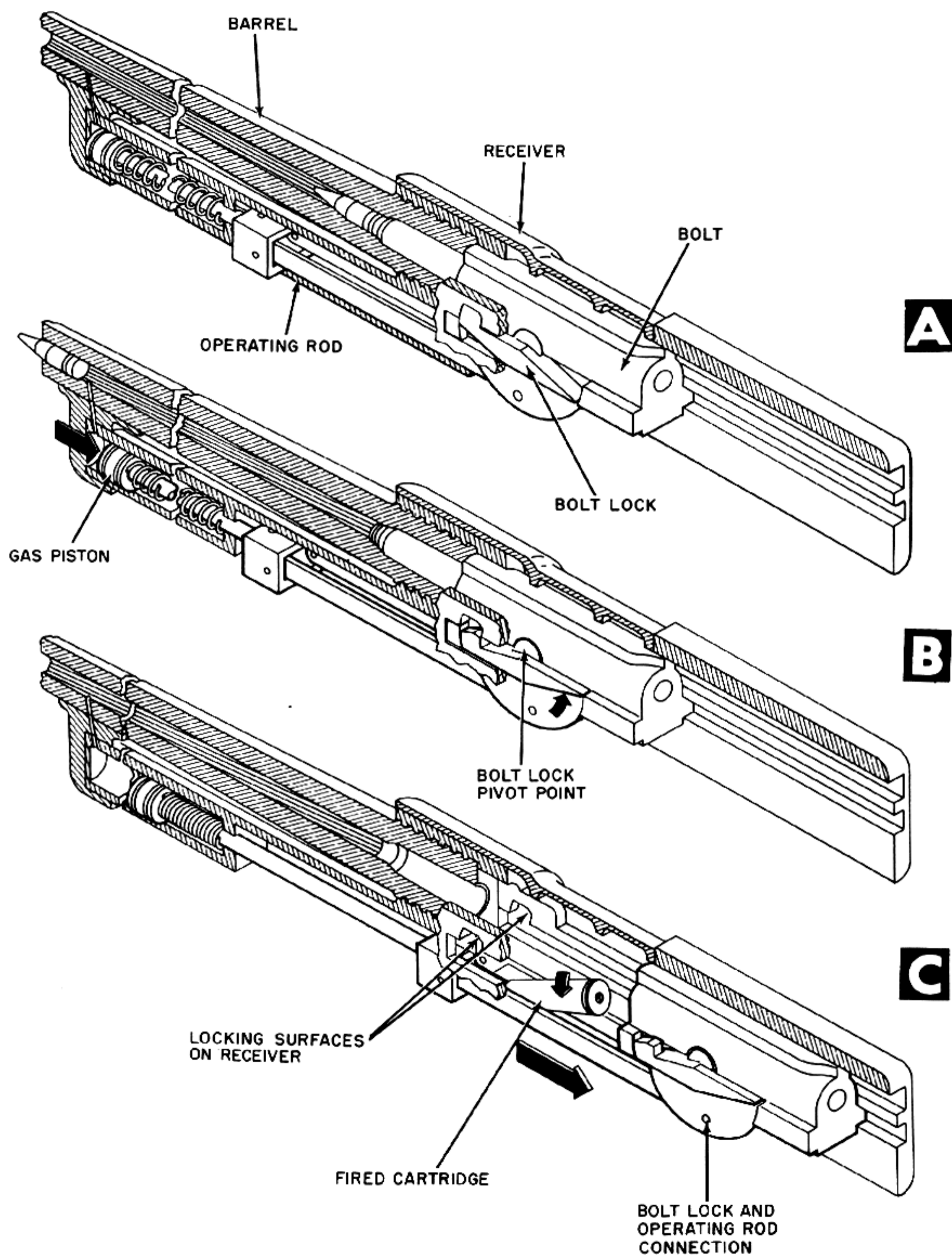


Figure 6-83. Operating Rod Rotates Pivoted Locking Block Free of Receiver.

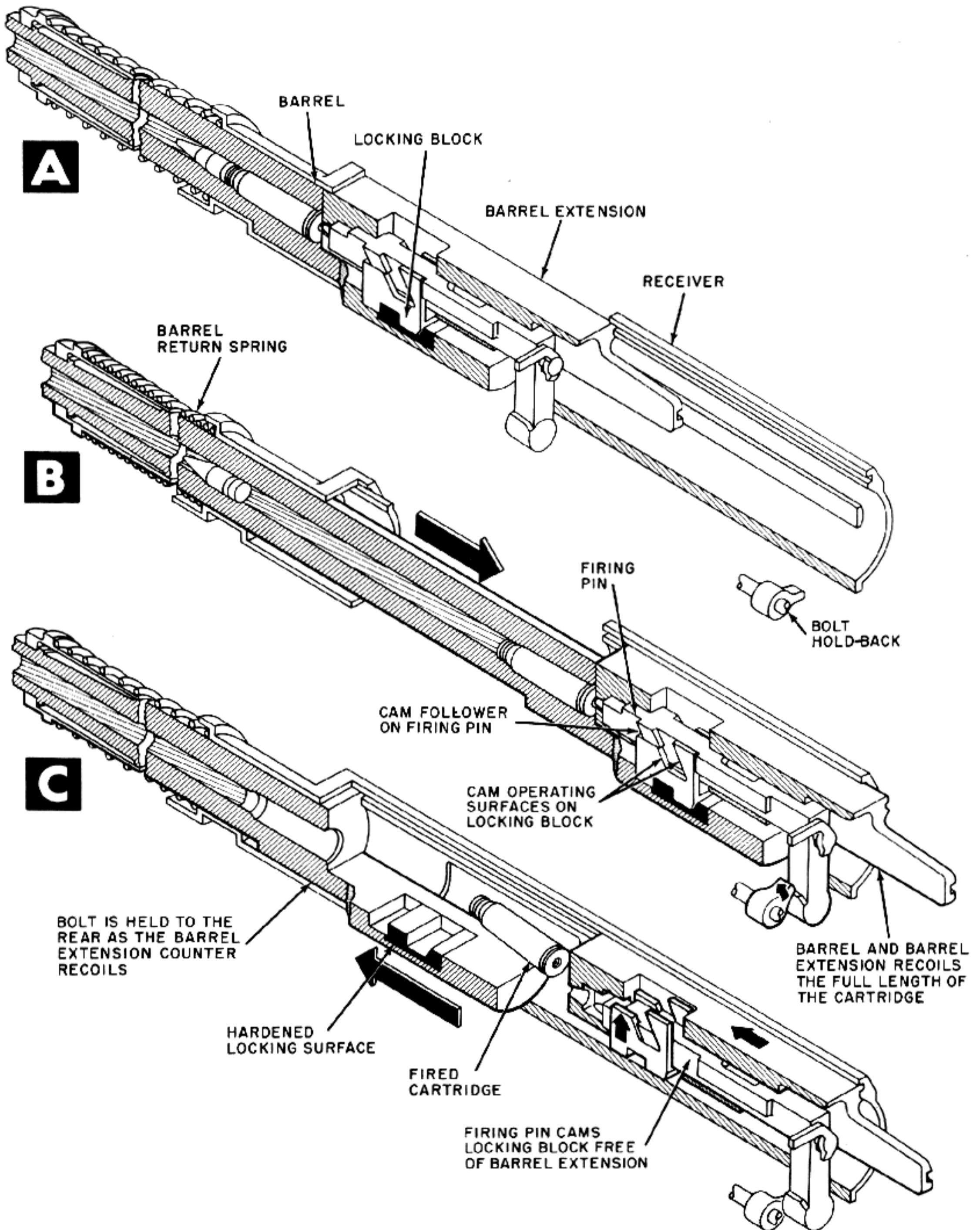


Figure 6-84. At End of Recoil Stroke, Firing Pin Is Held to the Rear. Barrel and Bolt Counter-Recoil Until Locking Block Is Cammed Free of Barrel Extension.



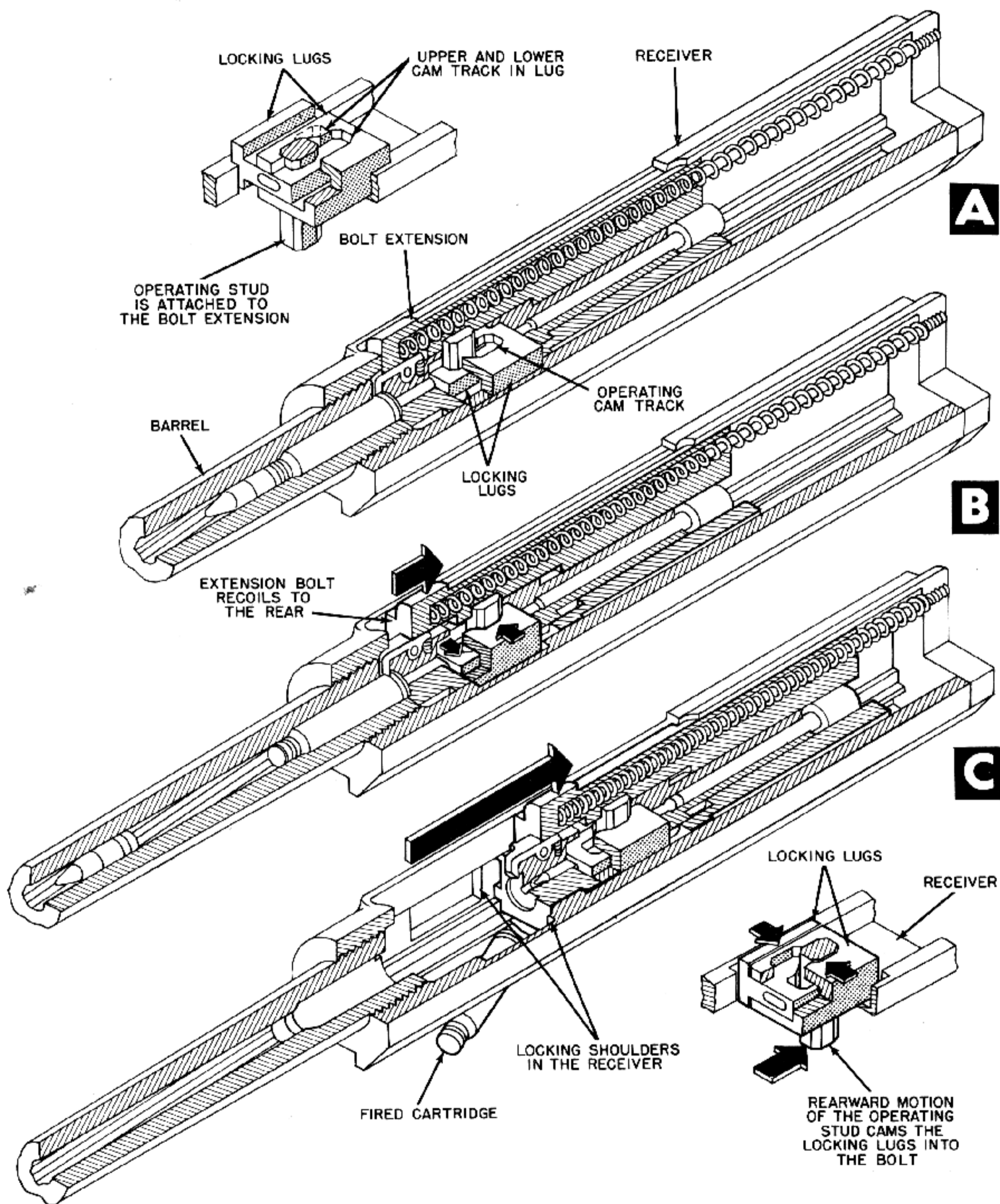


Figure 6-85. Recoiling Bolt Extension Cams Locking Lugs Free of Receiver.

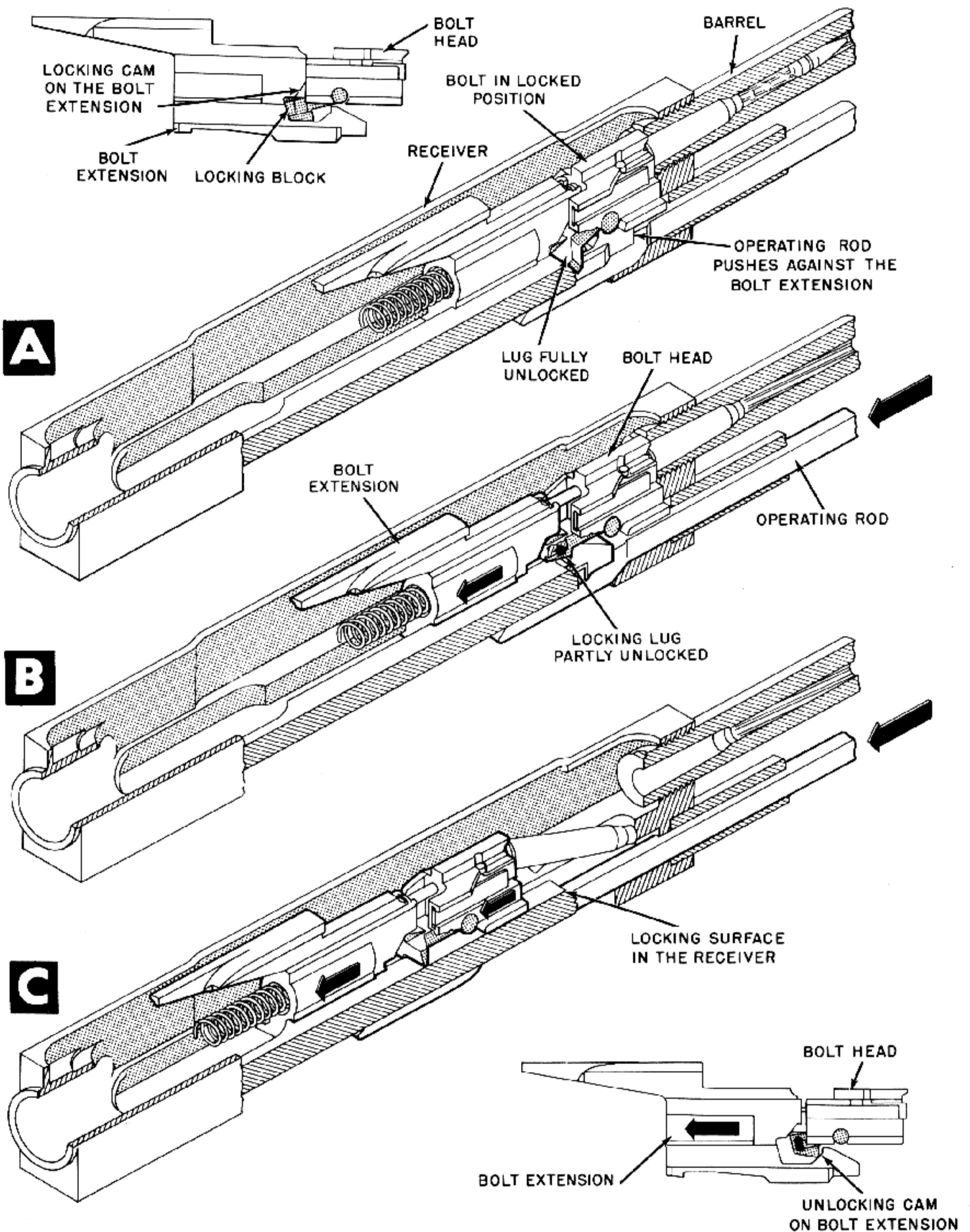


Figure 6-86. Recoiling Bolt Extension Lifts Locking Block Free of Receiver.



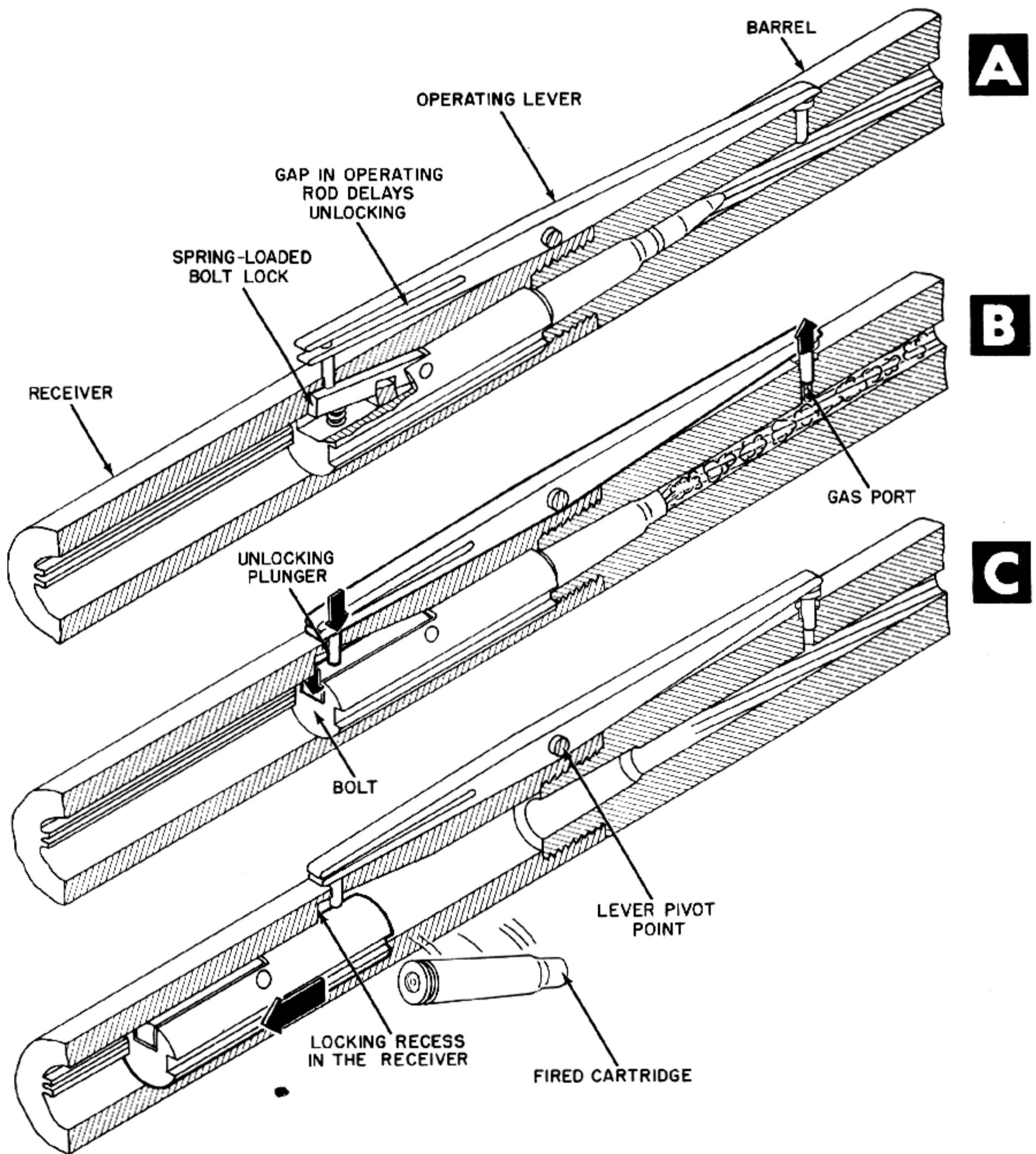


Figure 6-87. Gas-Operated Lever Unlocks Spring-Loaded Bolt Lock.



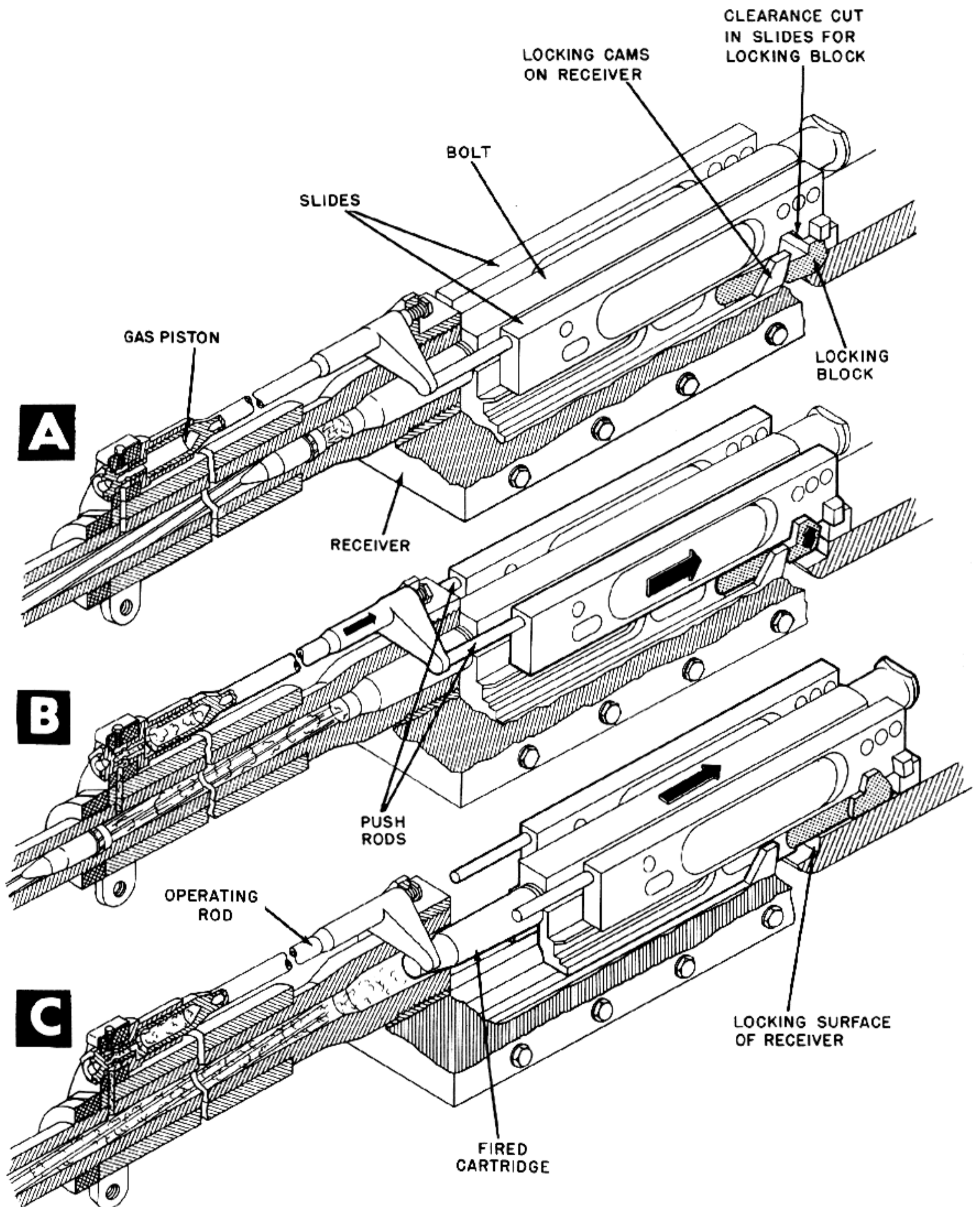


Figure 6-88. Slides Recoil Far Enough To Permit Locking Block To Cam Free of Receiver.

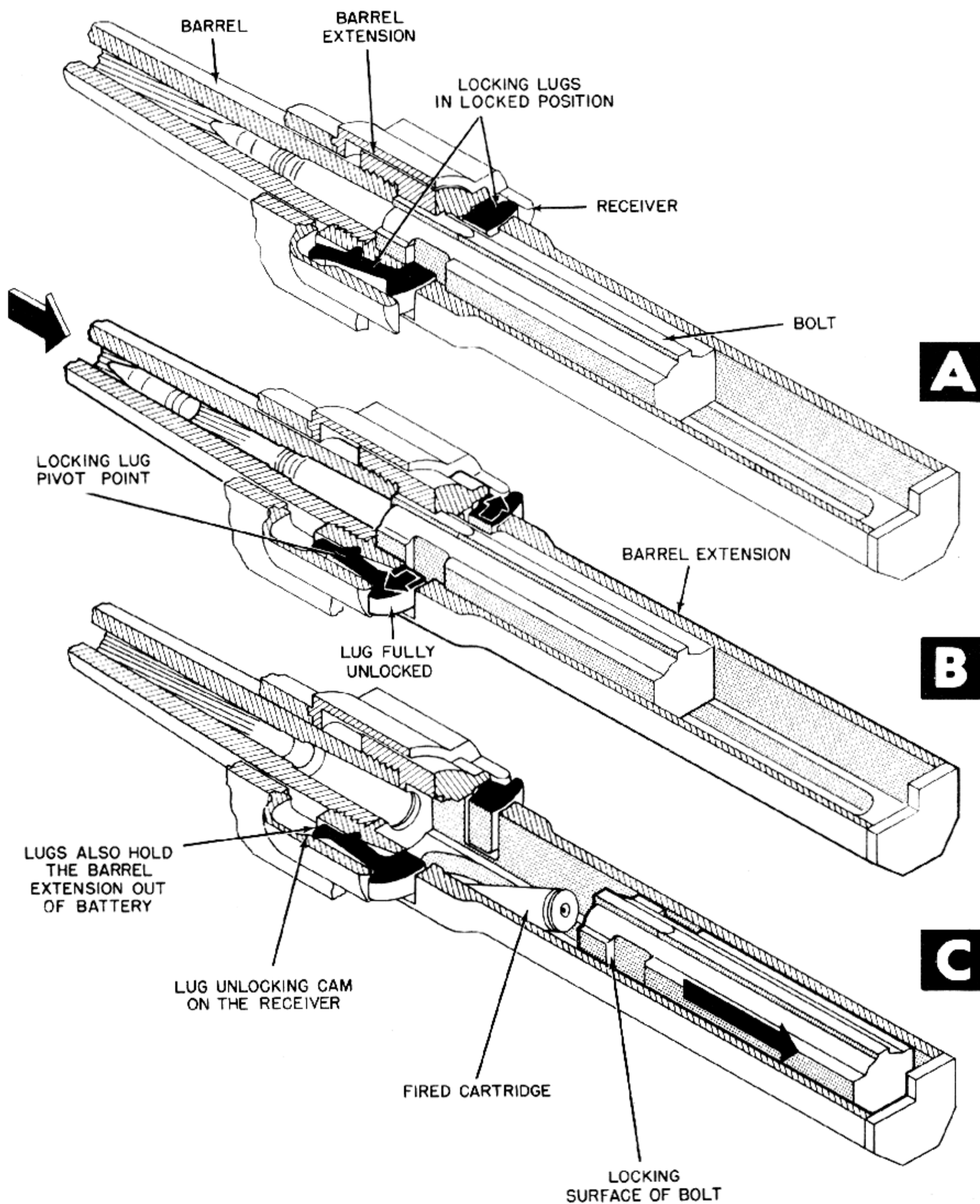


Figure 6-89. Recoiling Barrel Extension Cams Lugs Free of Bolt.

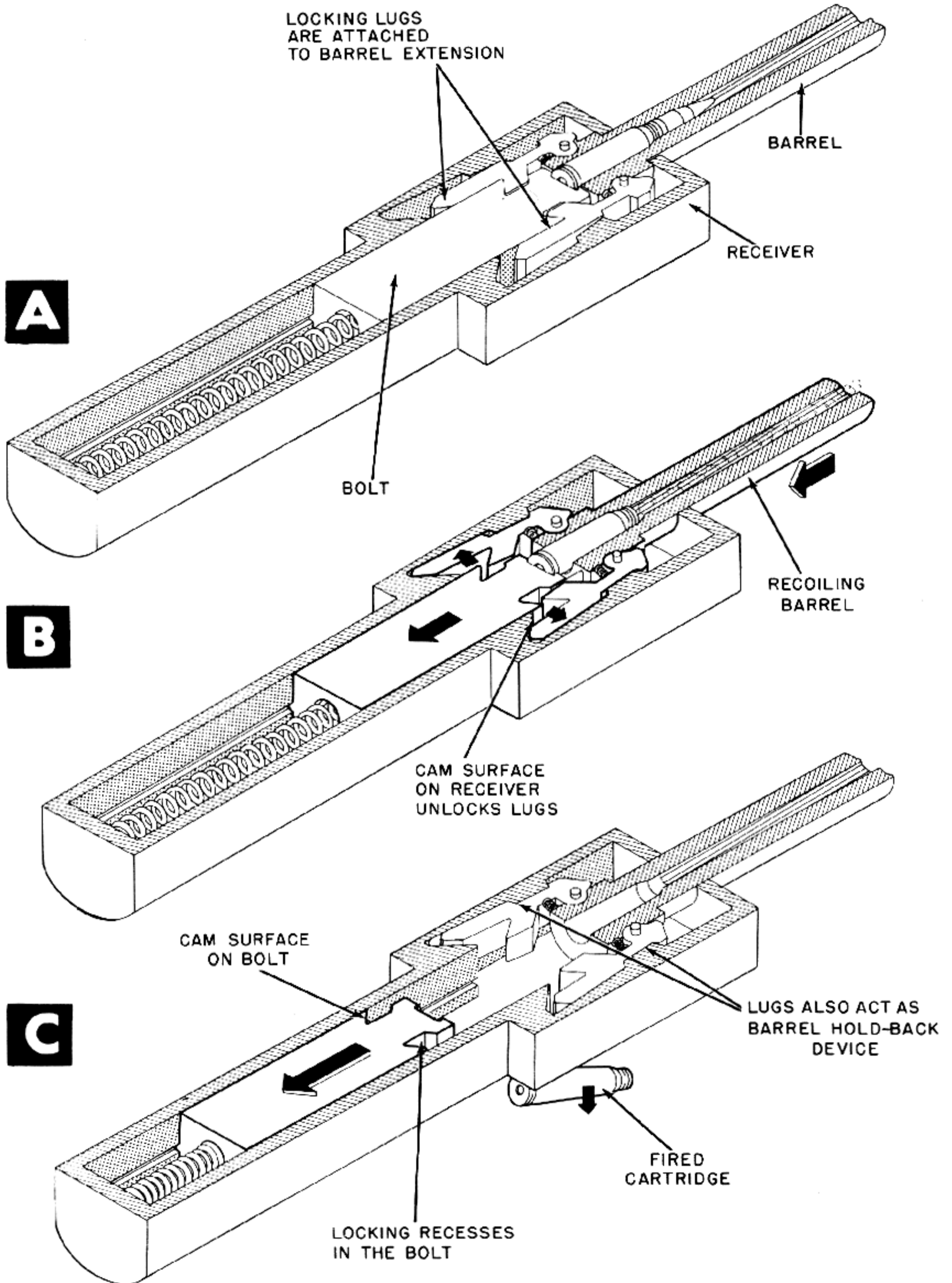


Figure 6-90. Recoiling Barrel Extension Cams Locking Lugs Free of Bolt.



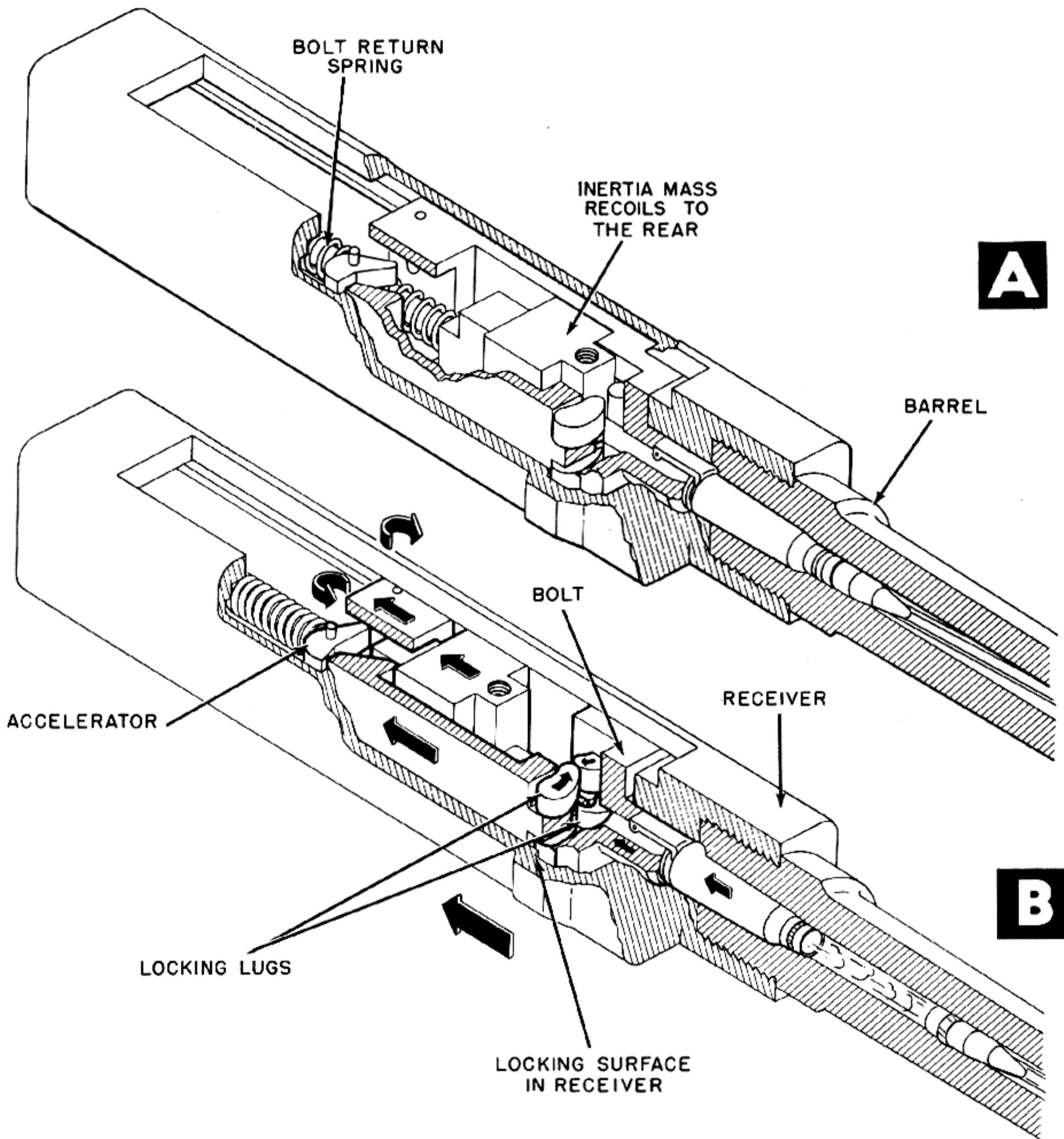


Figure 6-91. Recoiling Mass Unlocks Bolt.

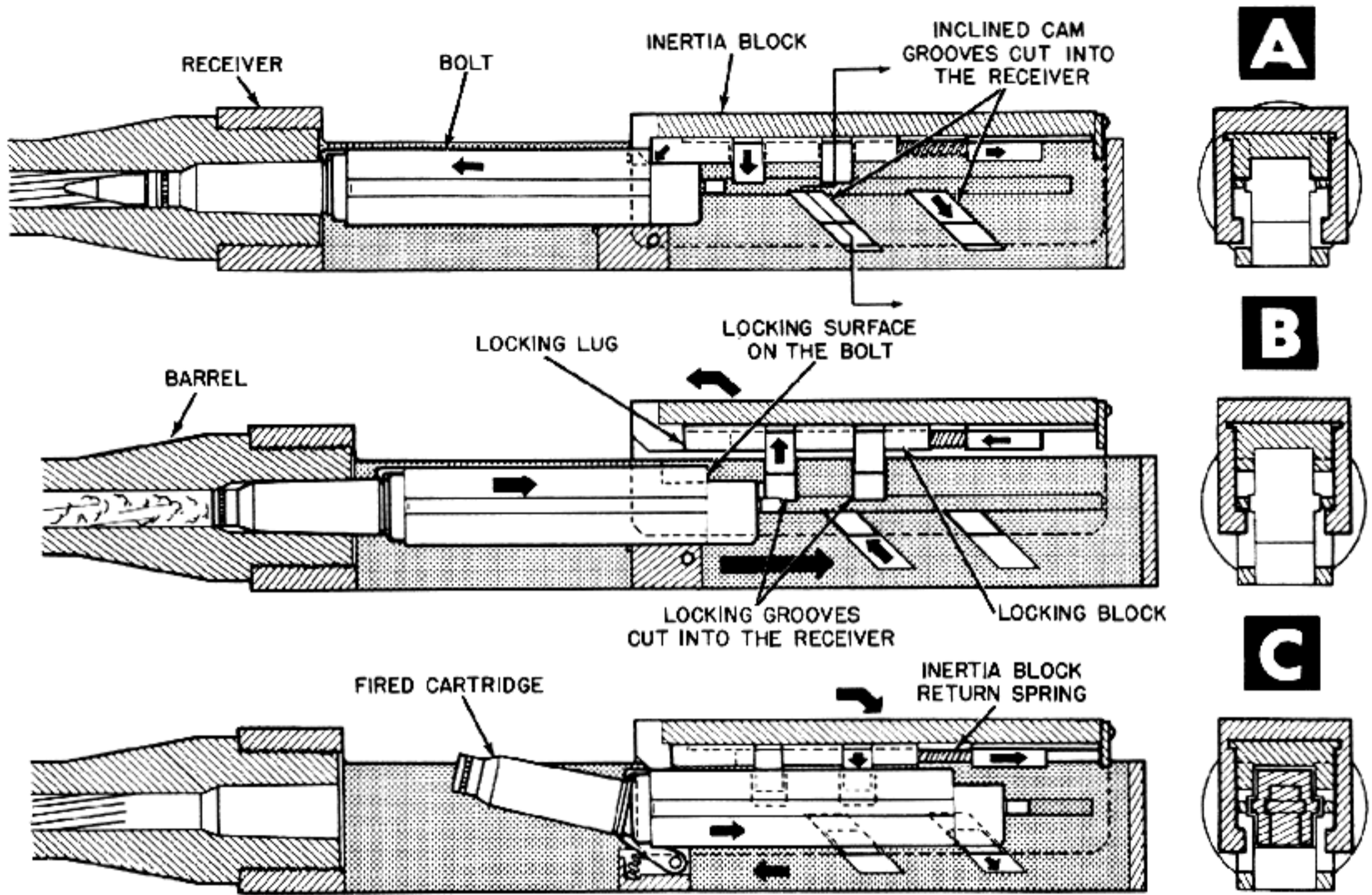


Figure 6-92. Recoiling Mass Unlocks Bolt.

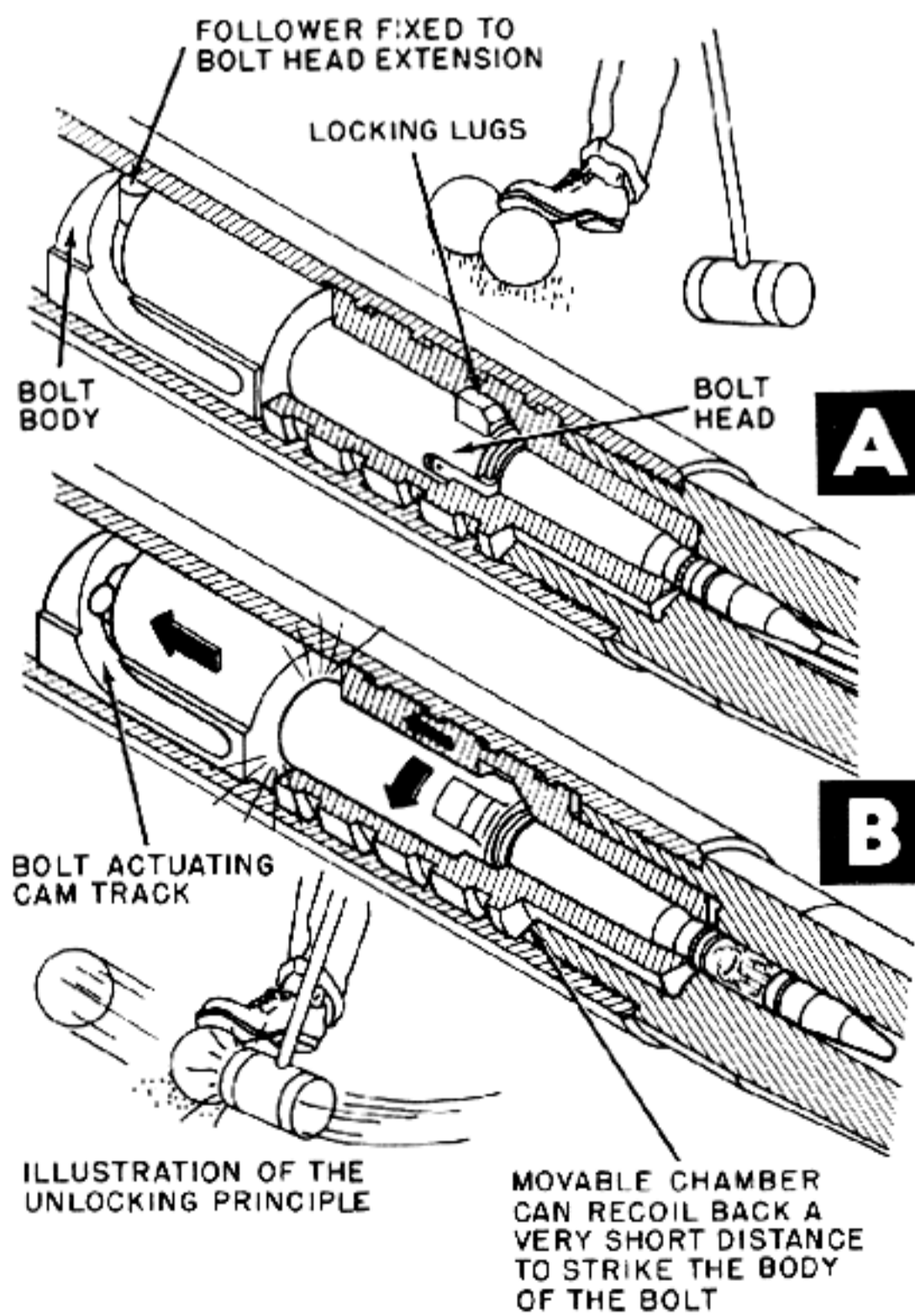


Figure 6-93. Impact of Recoiling Chamber Unlocks Bolt.

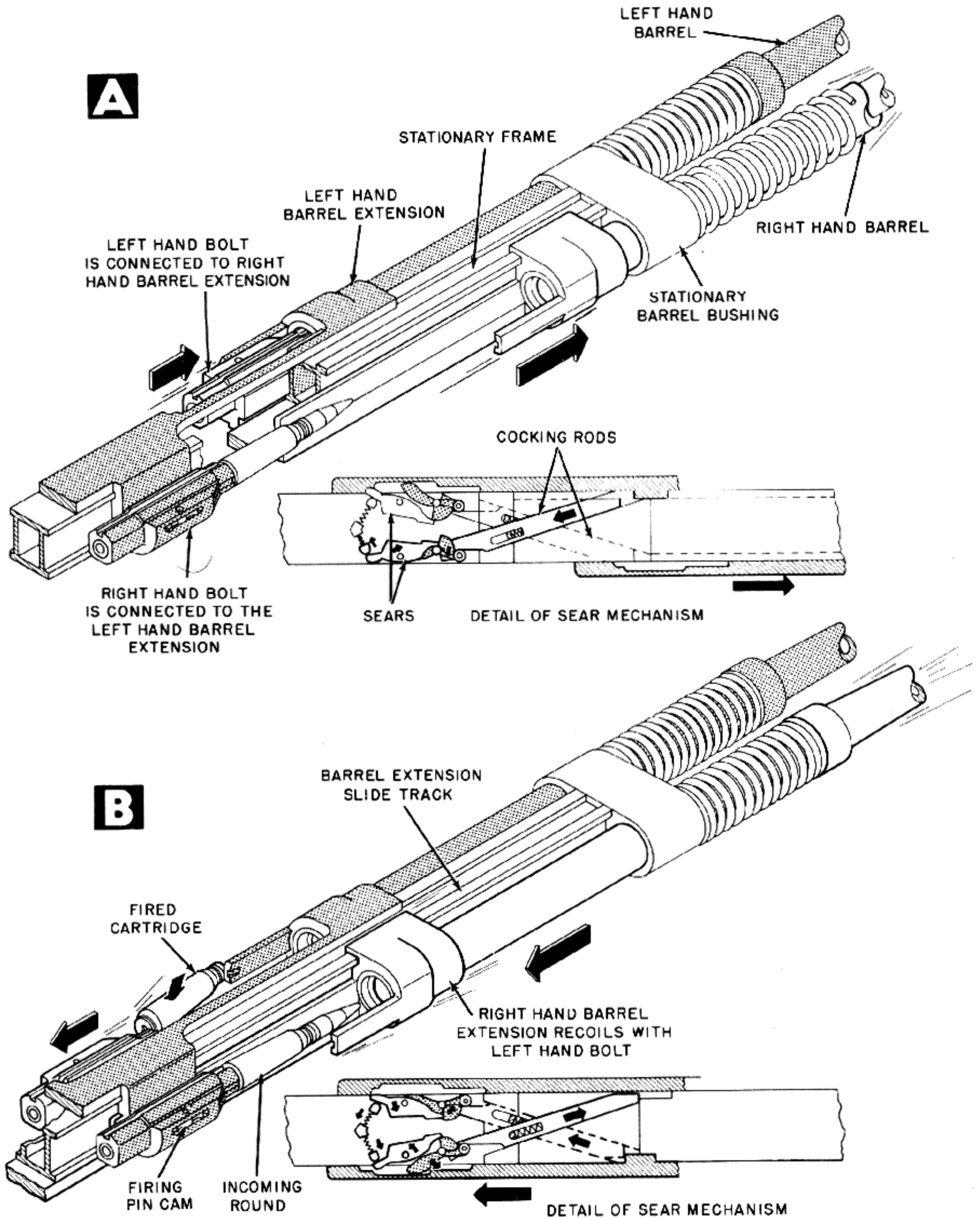
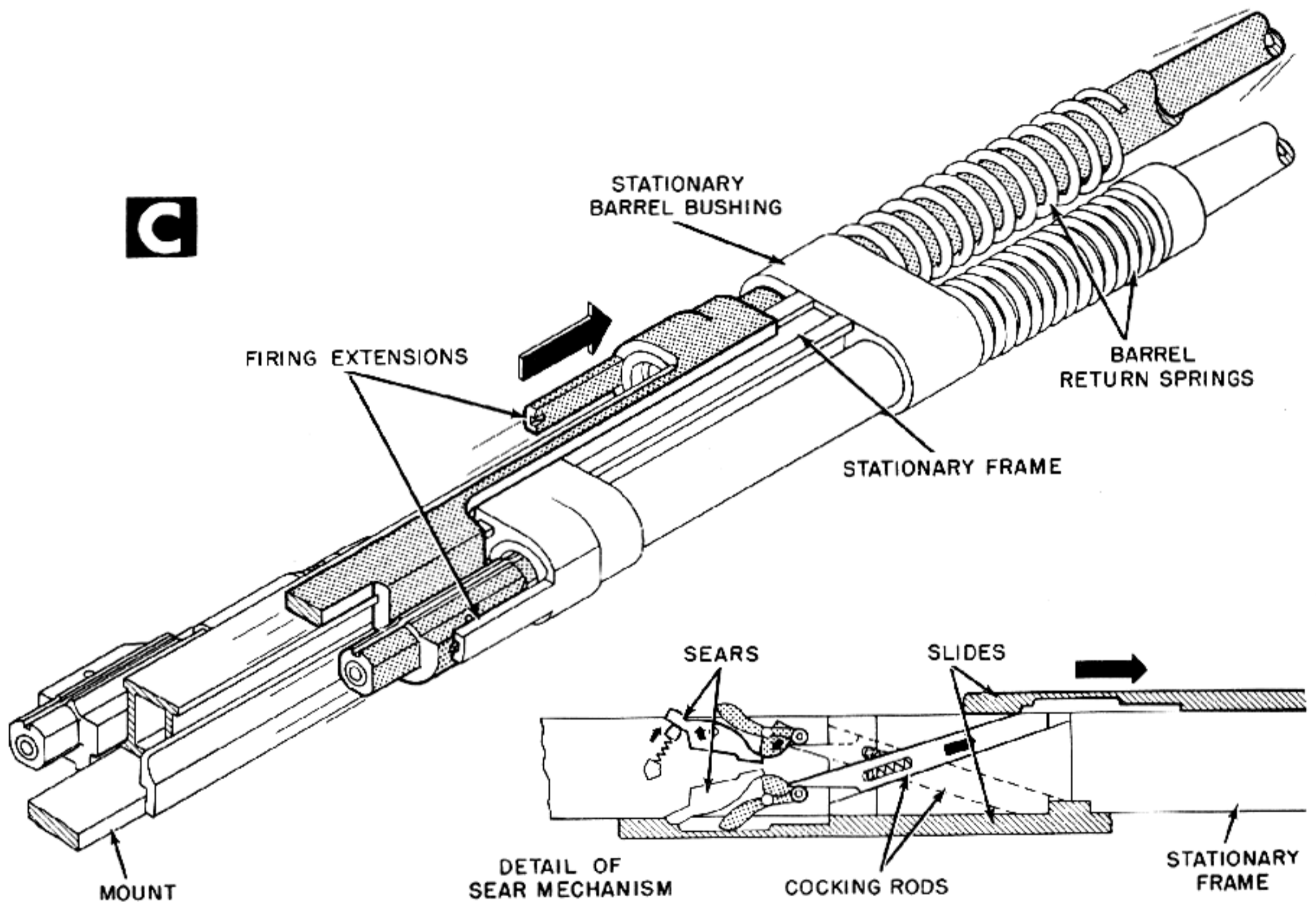


Figure 6-94. Double Barrel





Retarded Blowback Gun.

# THE MACHINE GUN

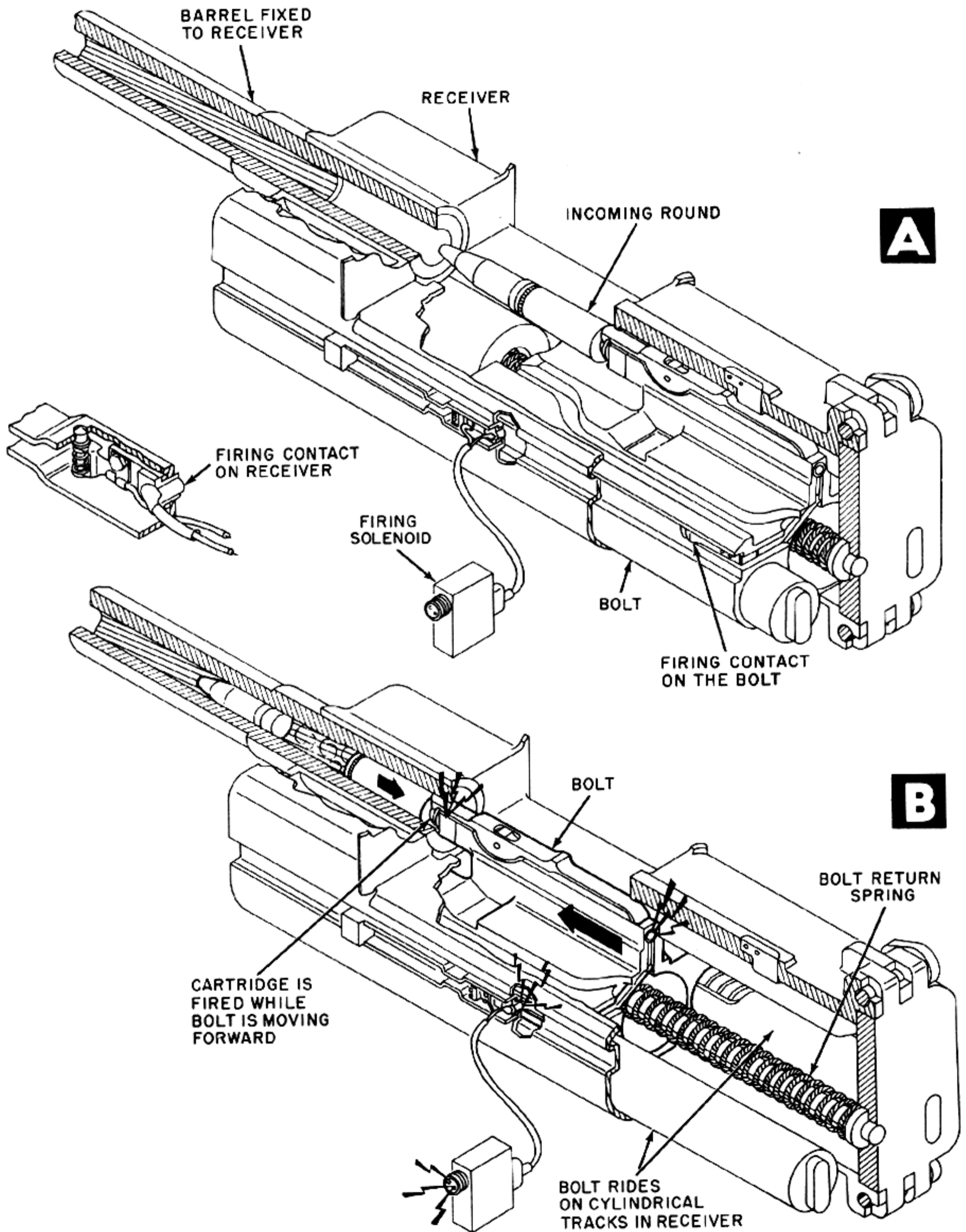
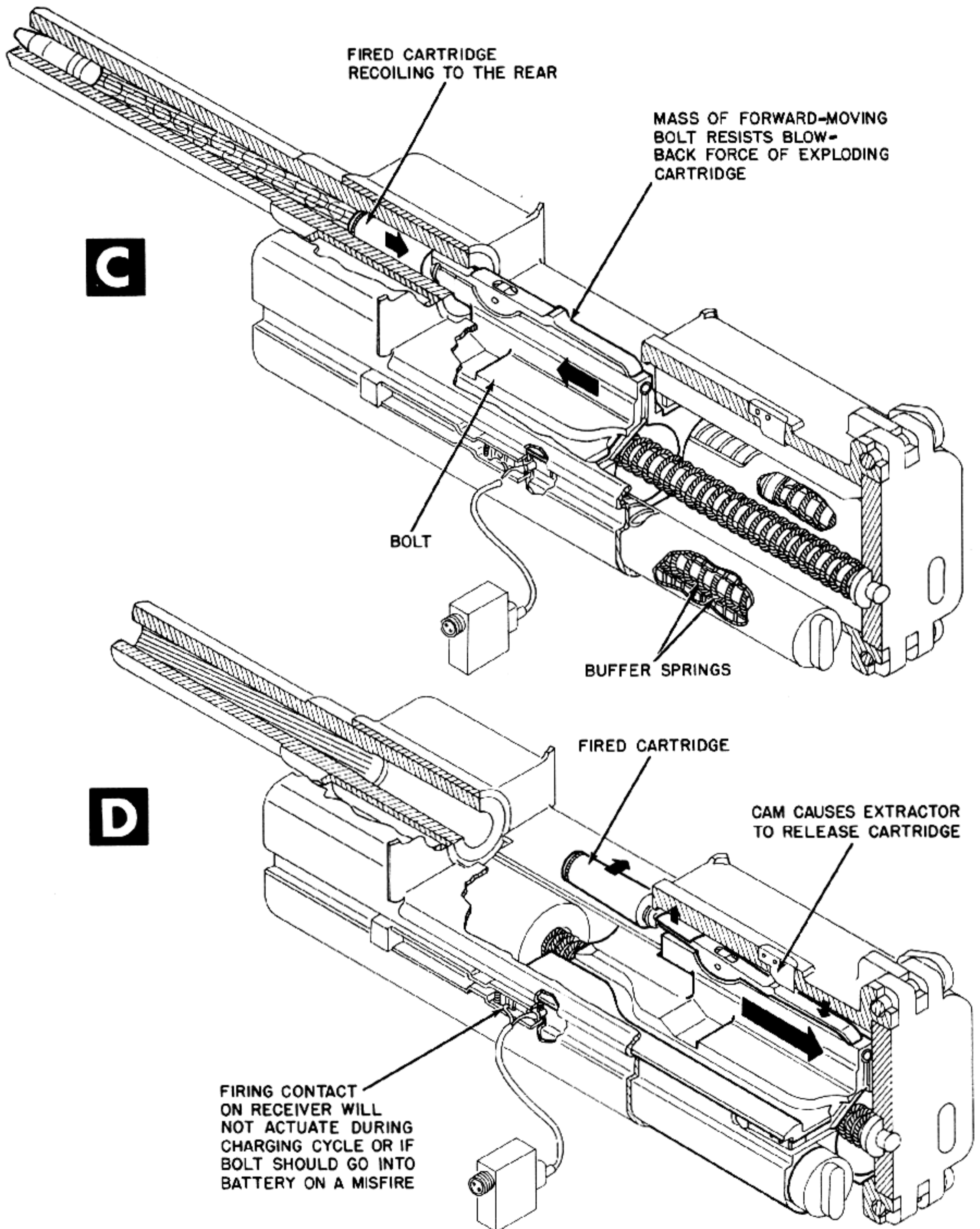


Figure 6-95. Unlocking Delayed



by Inertia of Moving Bolt.



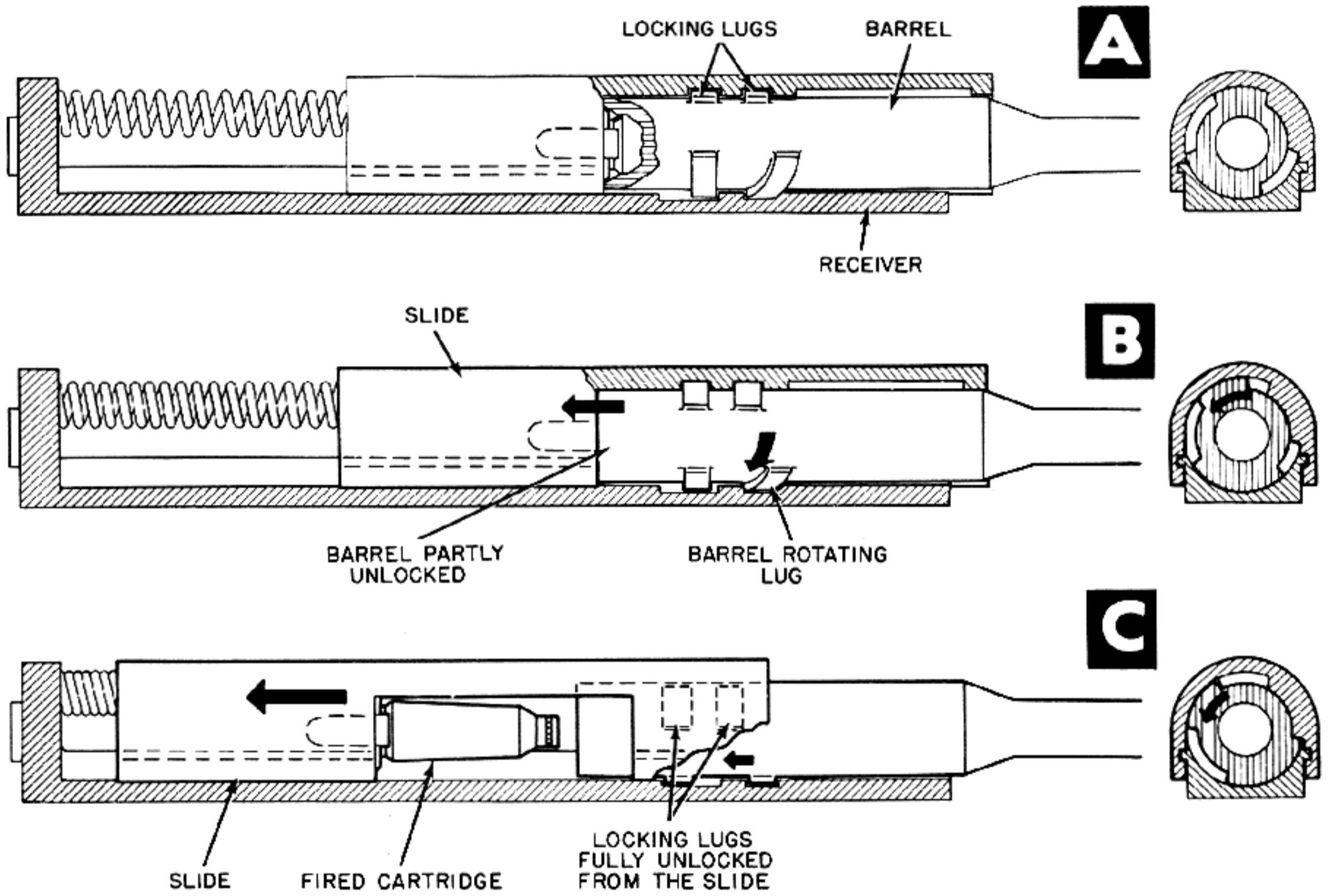


Figure 6-96. Recoiling Barrel Is Rotated Free of the Slide.

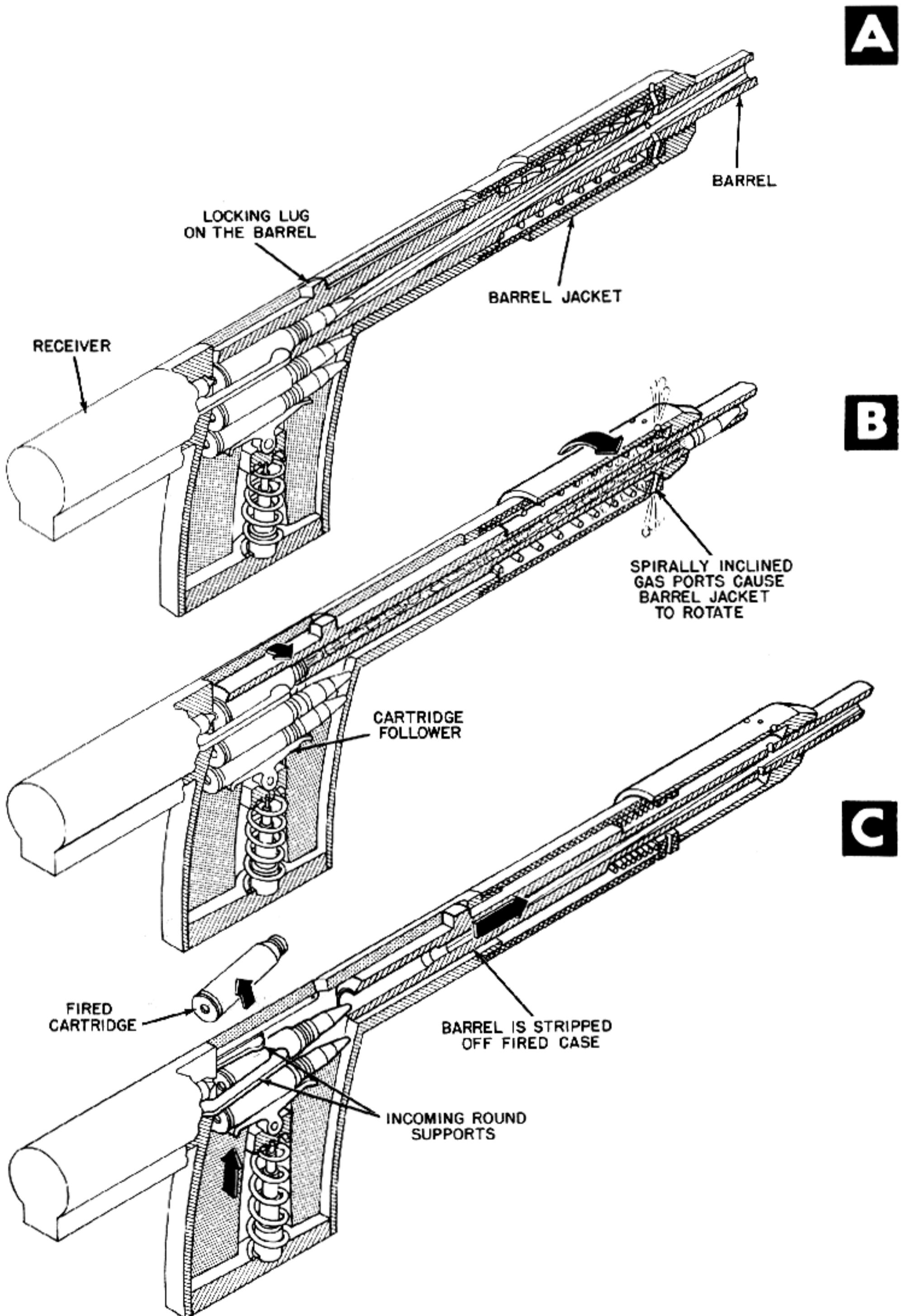


Figure 6-97. Rotating Gases Unlock and Blow Barrel Forward.

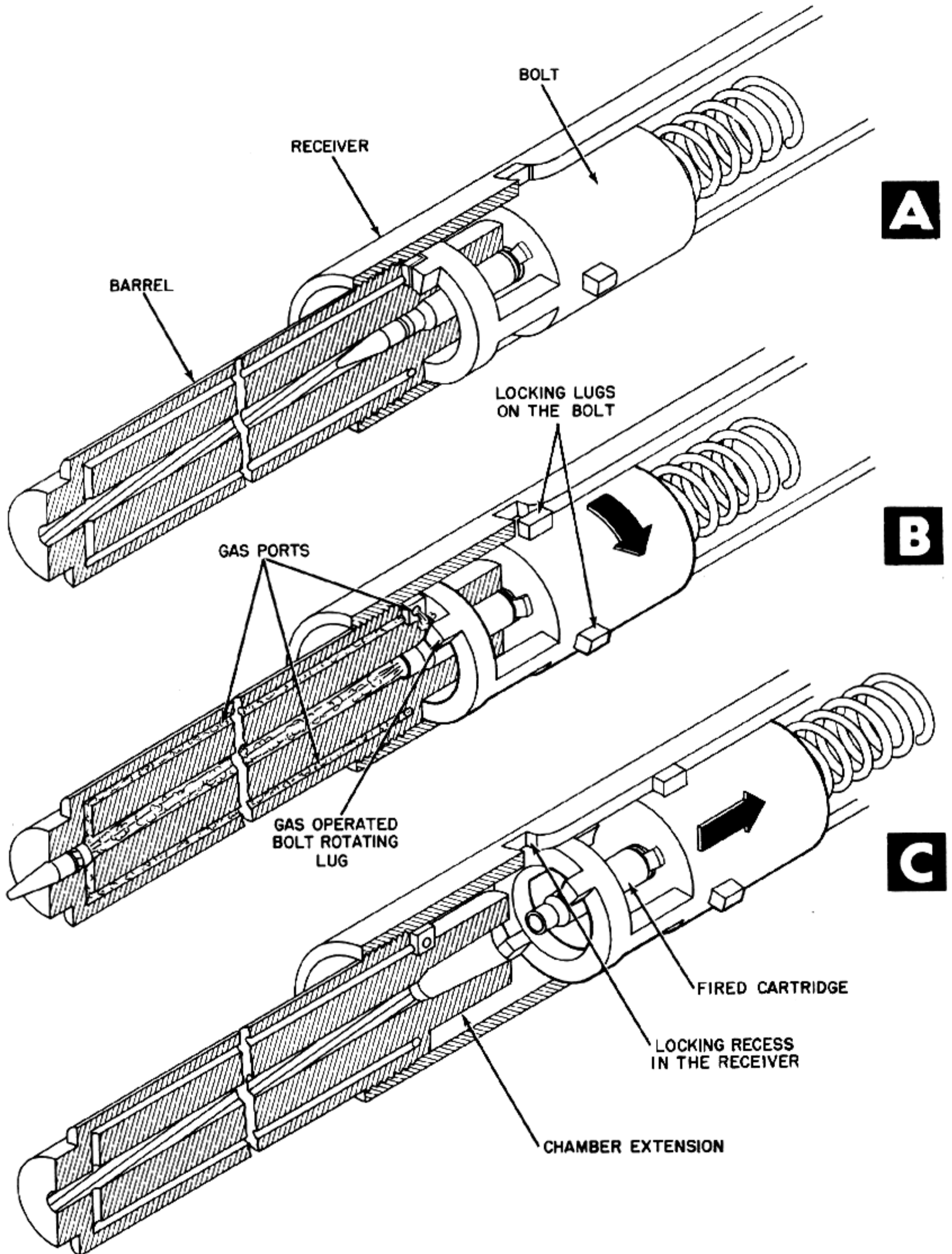


Figure 6-98. Gas Pressure Rotates Bolt to Unlocked Position.



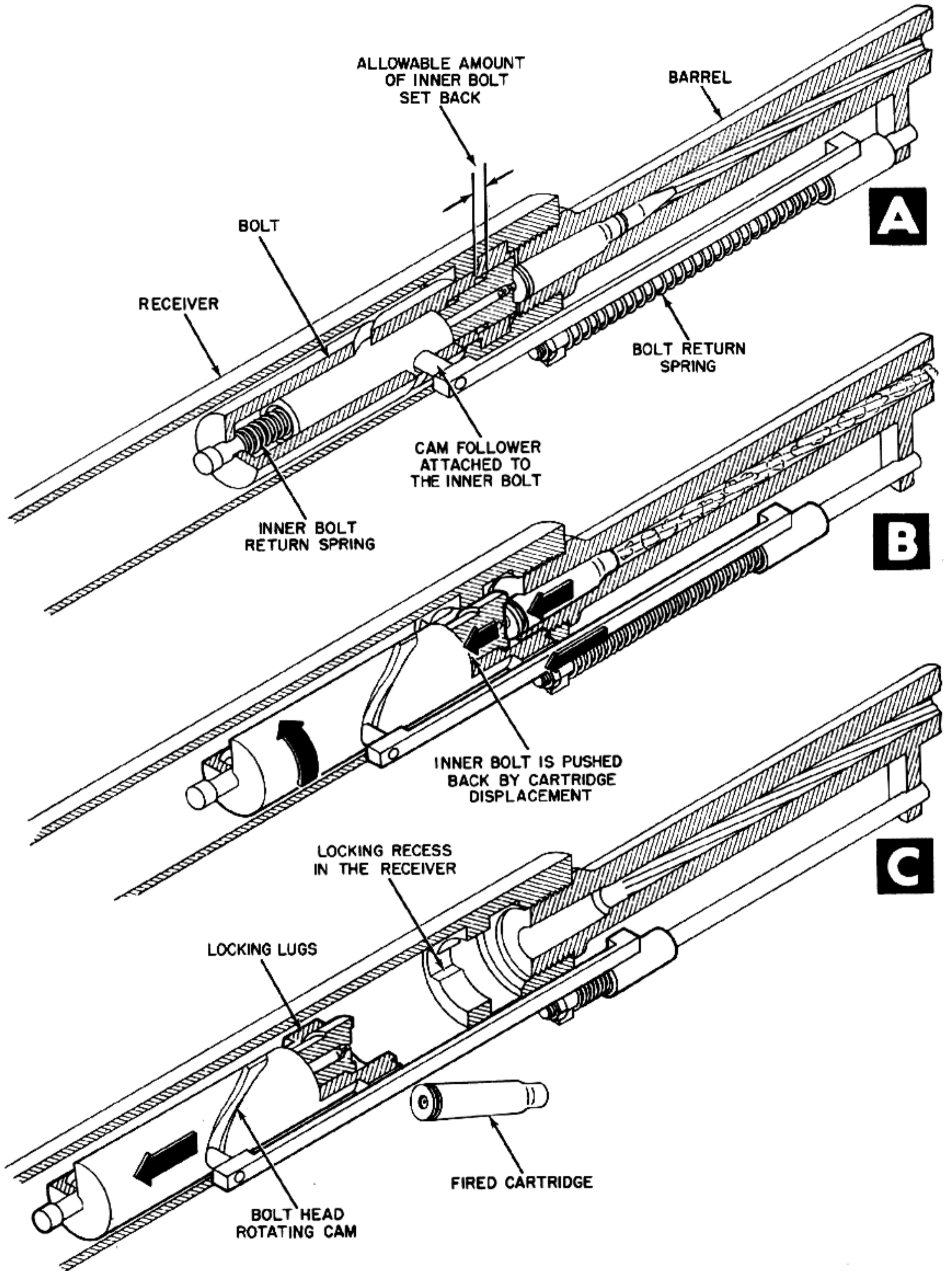


Figure 6-99. Recoiling Cartridge Case Unlocks Bolt.

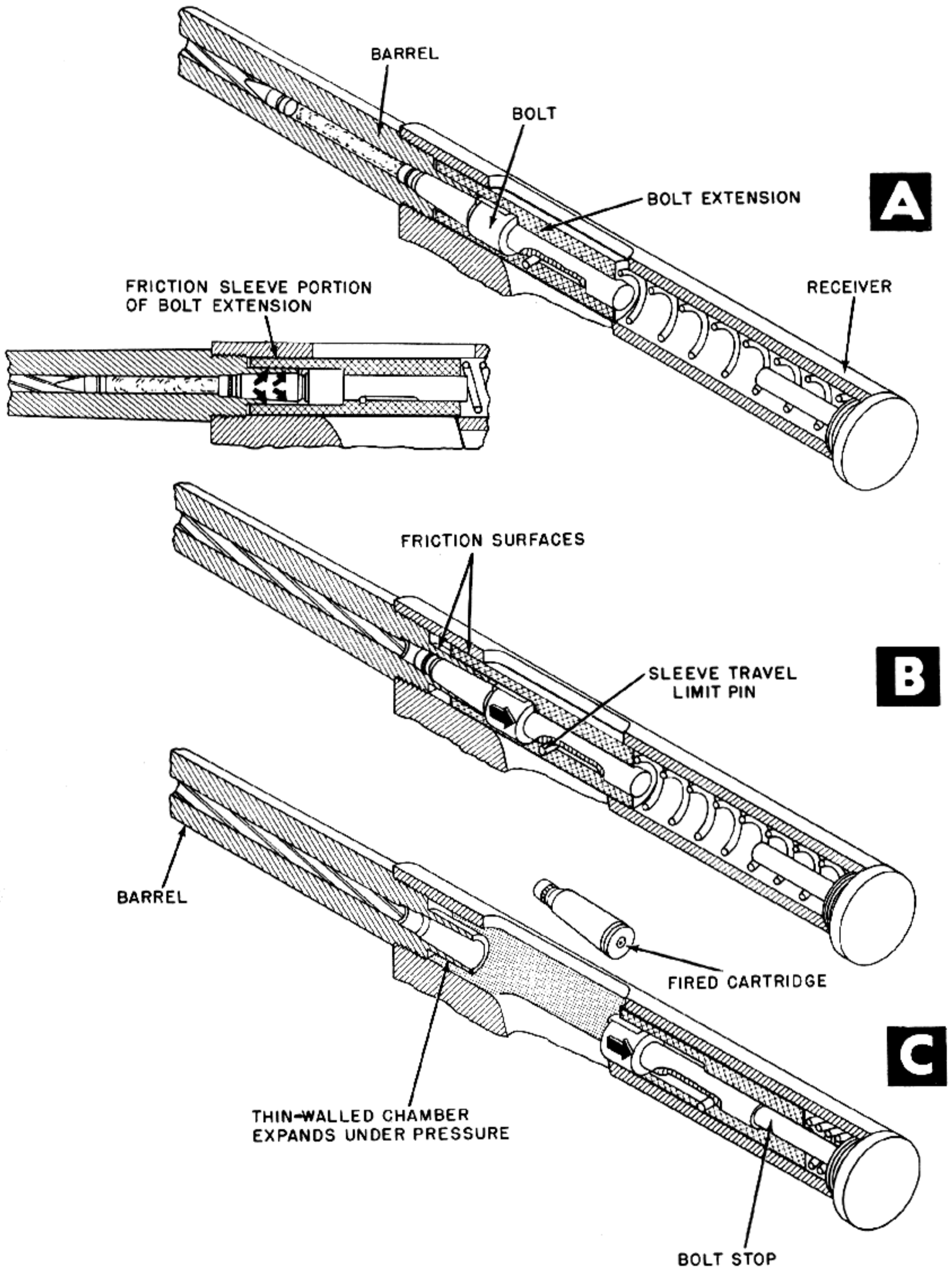


Figure 6-100. Expansion of Chamber Locks Bolt to Barrel.

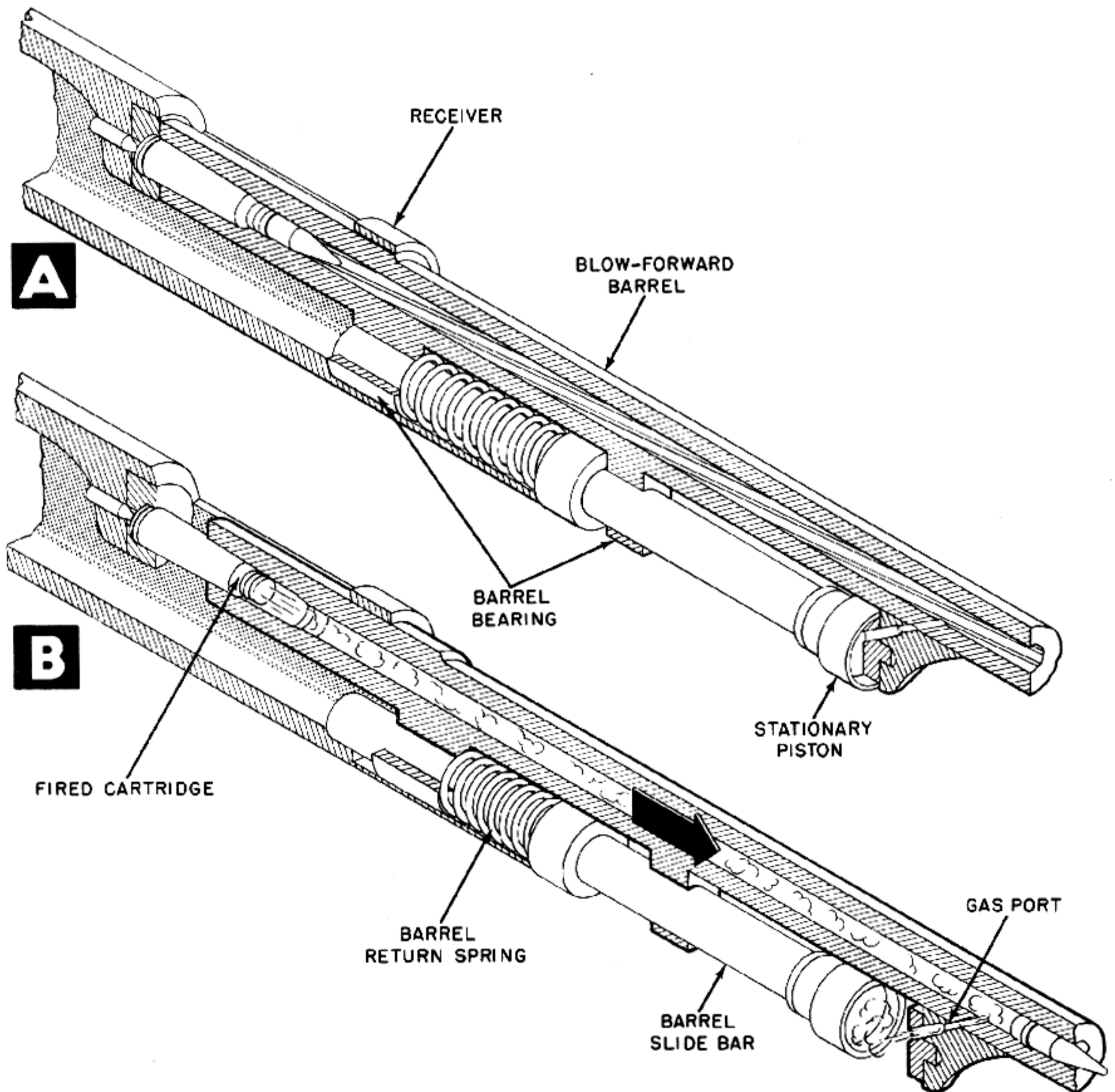


Figure 6-101. Barrel Is Blown Forward by Gases Acting on a Solid Piston.



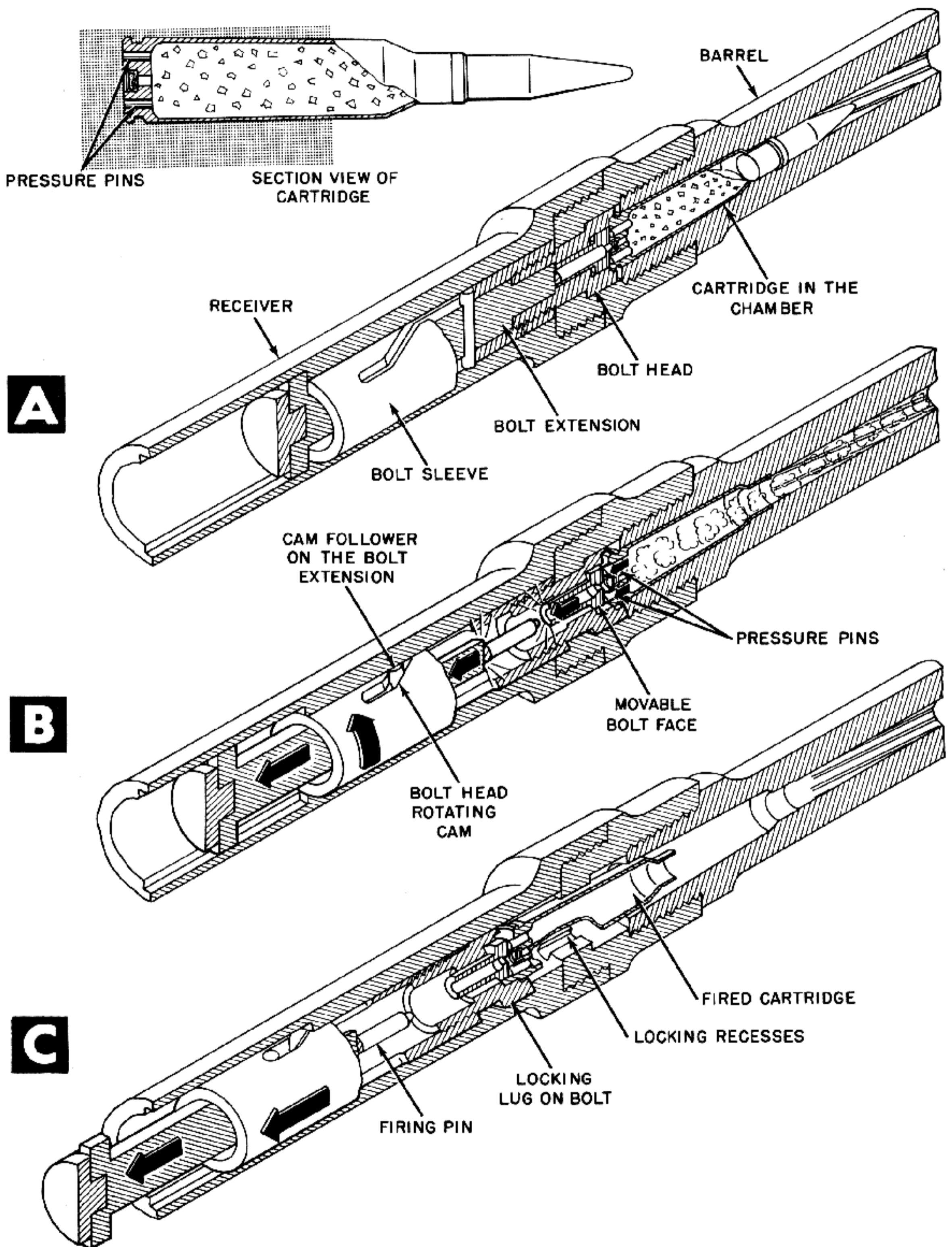


Figure 6-102. Pins in Base of Cartridge Unlock Bolt.

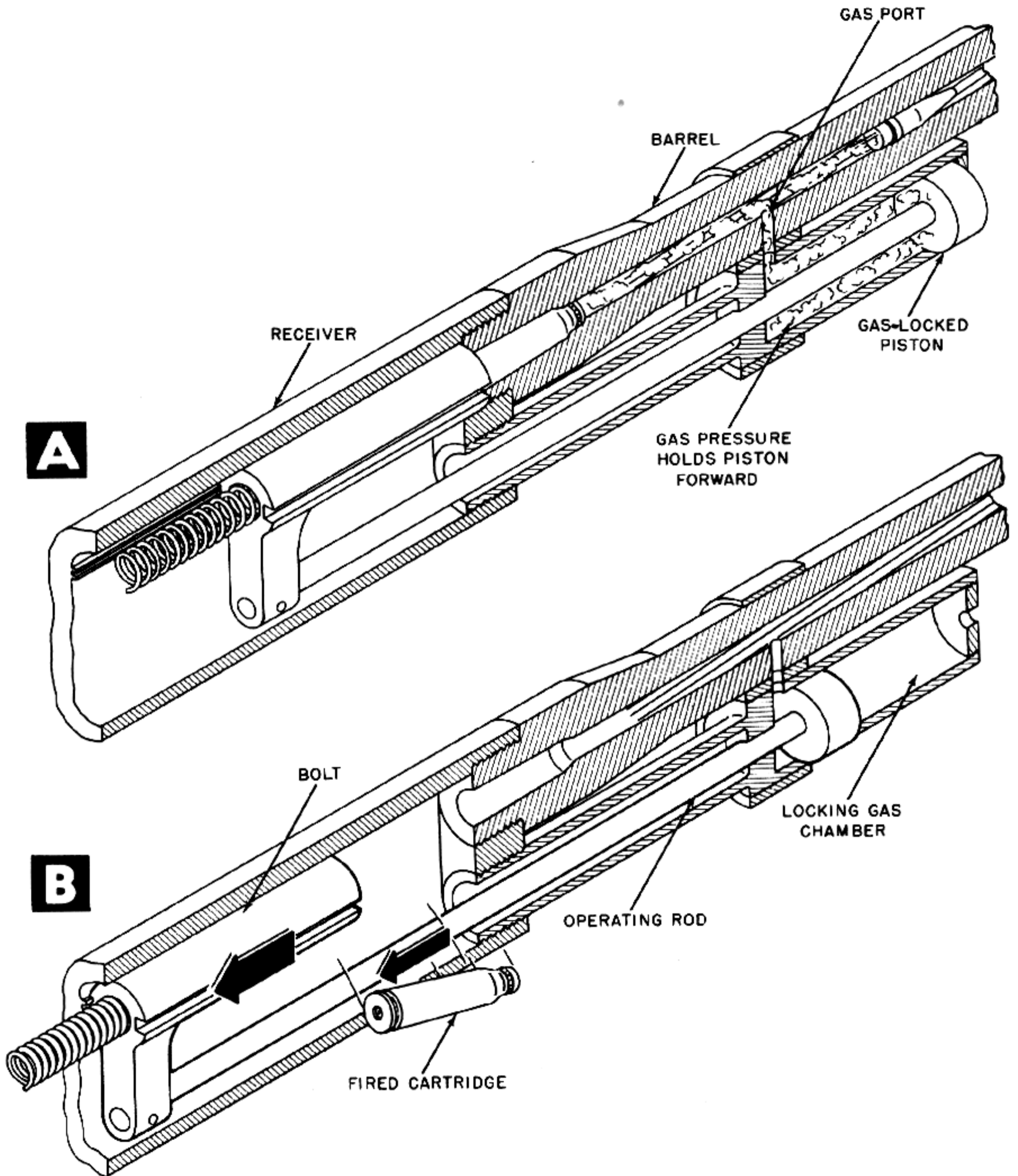


Figure 6-103. Bolt Is Locked to Barrel by Gas Pressure.

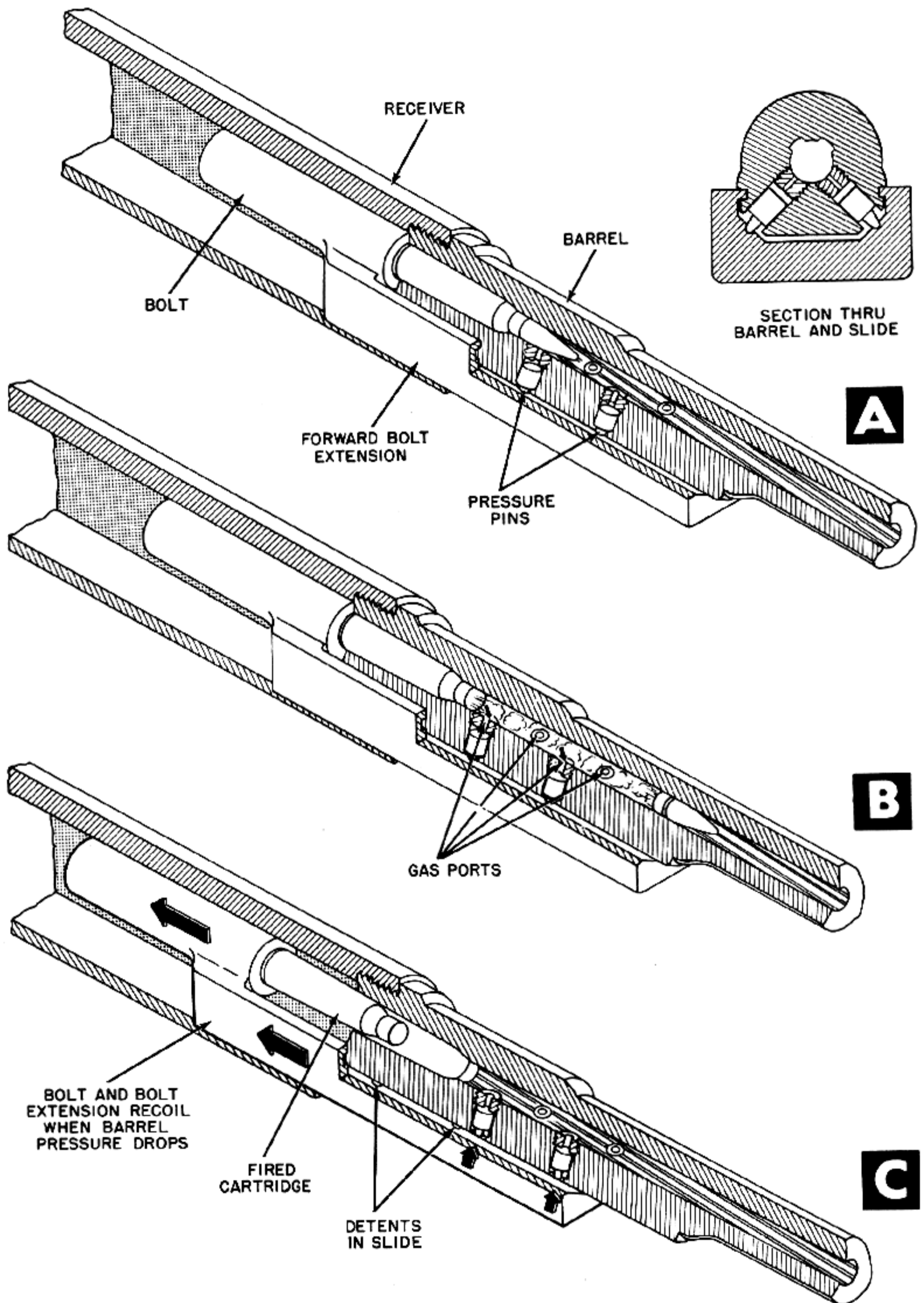


Figure 6-104. Bolt Is Locked to Barrel by Gas Pressure.



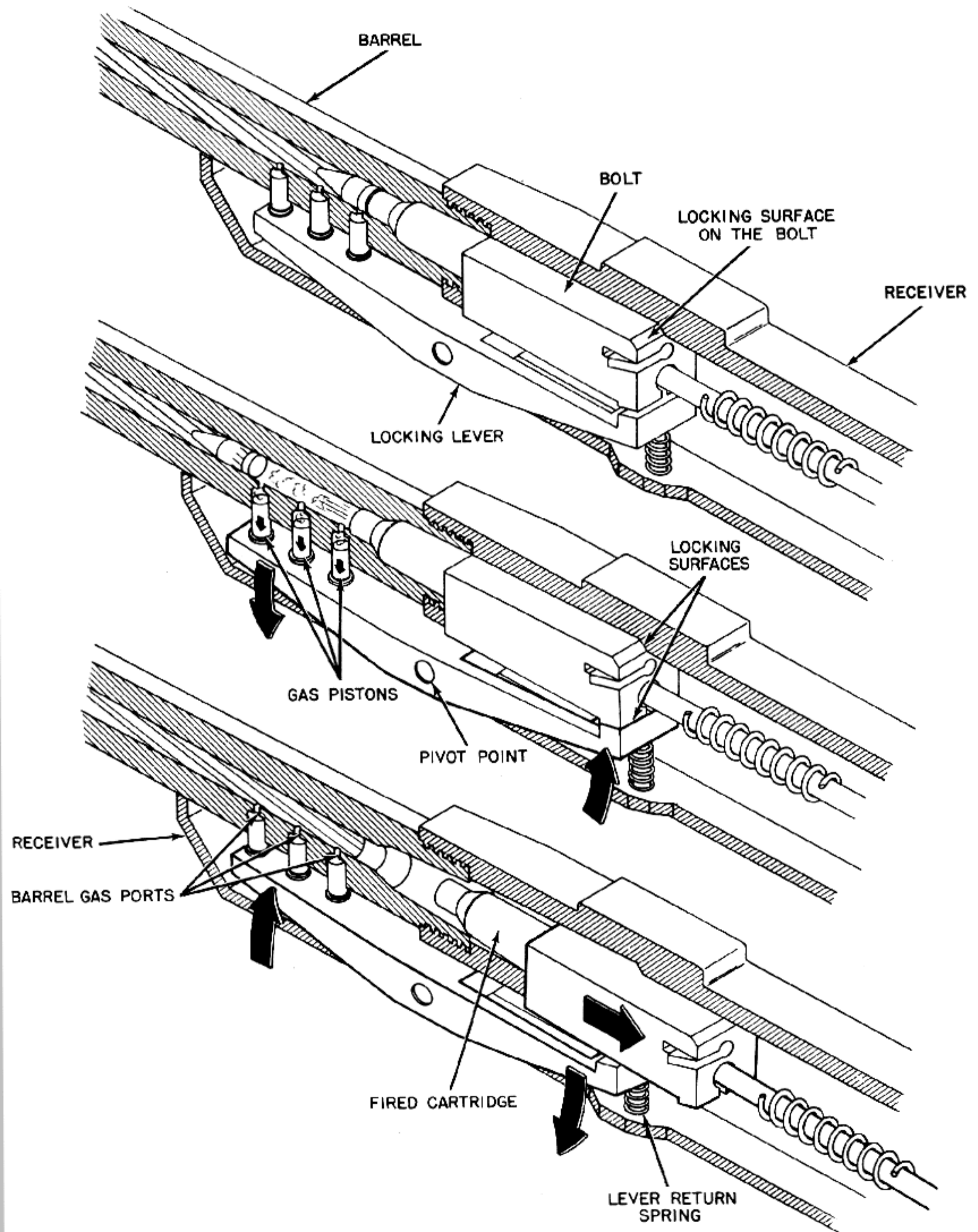


Figure 6-105. Gas Pressure Acting on Lever Locks Bolt.

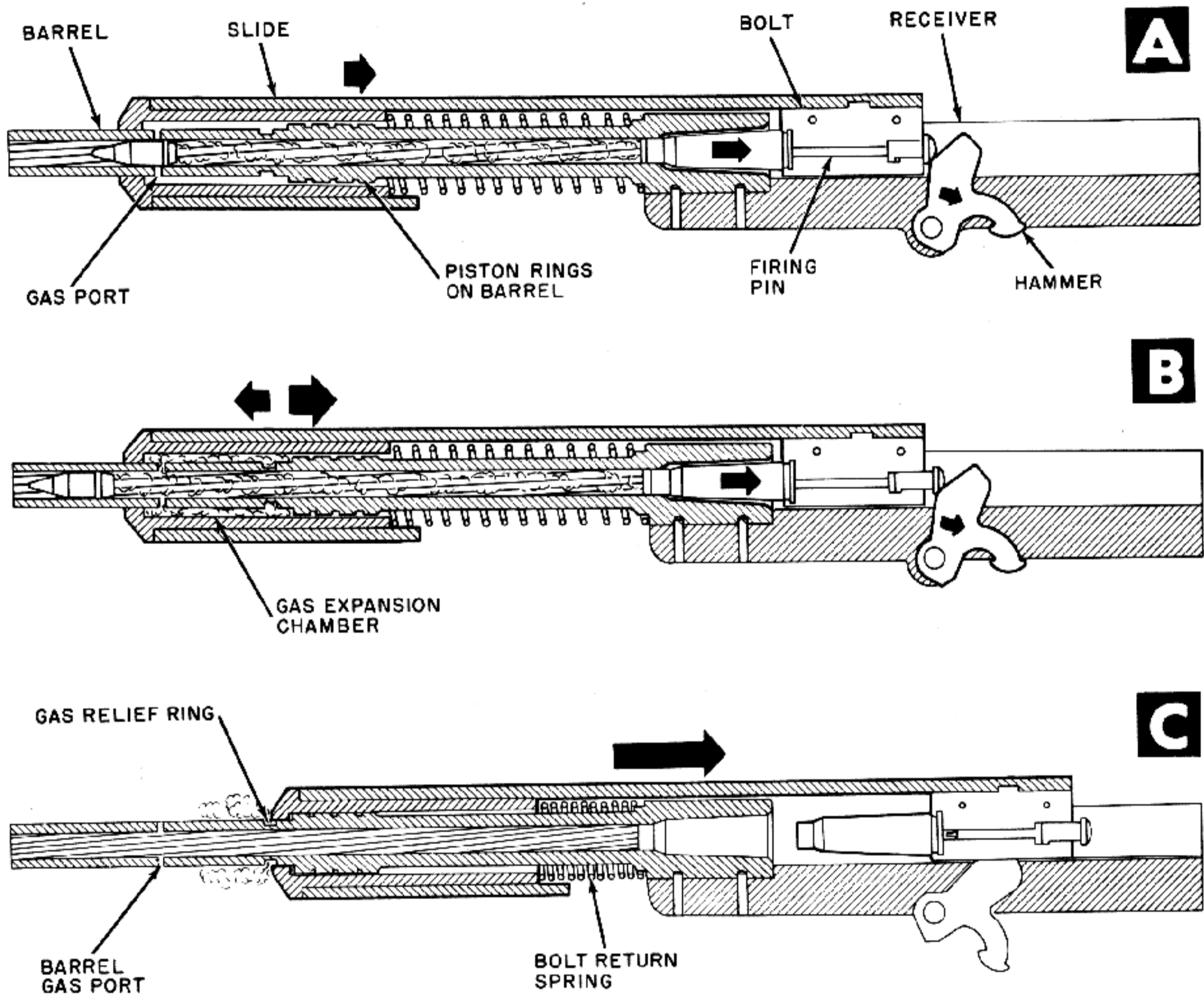


Figure 6-106. Gas Pressure Acting on Slide Retards Unlocking.

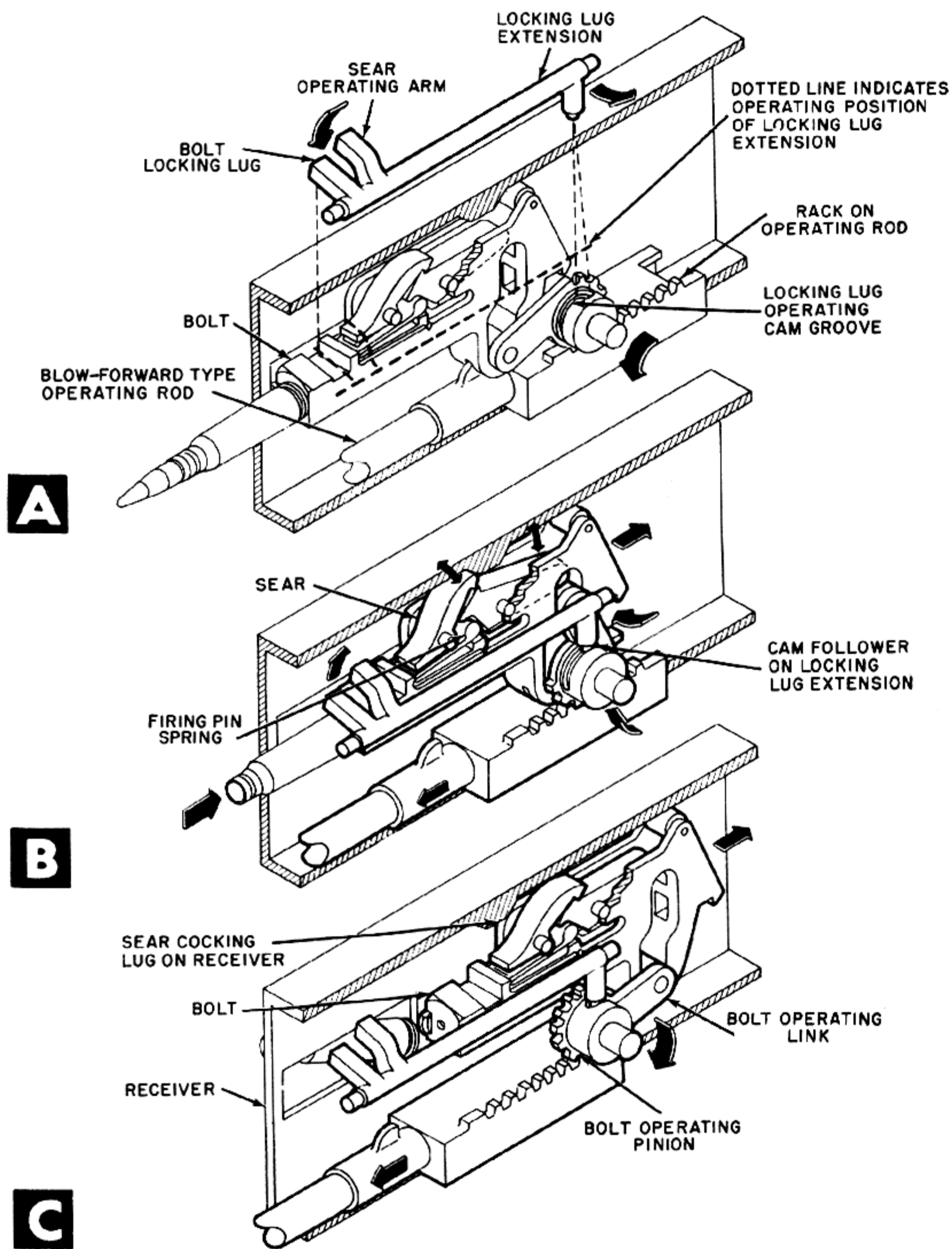


Figure 6-107. Cam Groove on Pinion Unlocks Bolt.



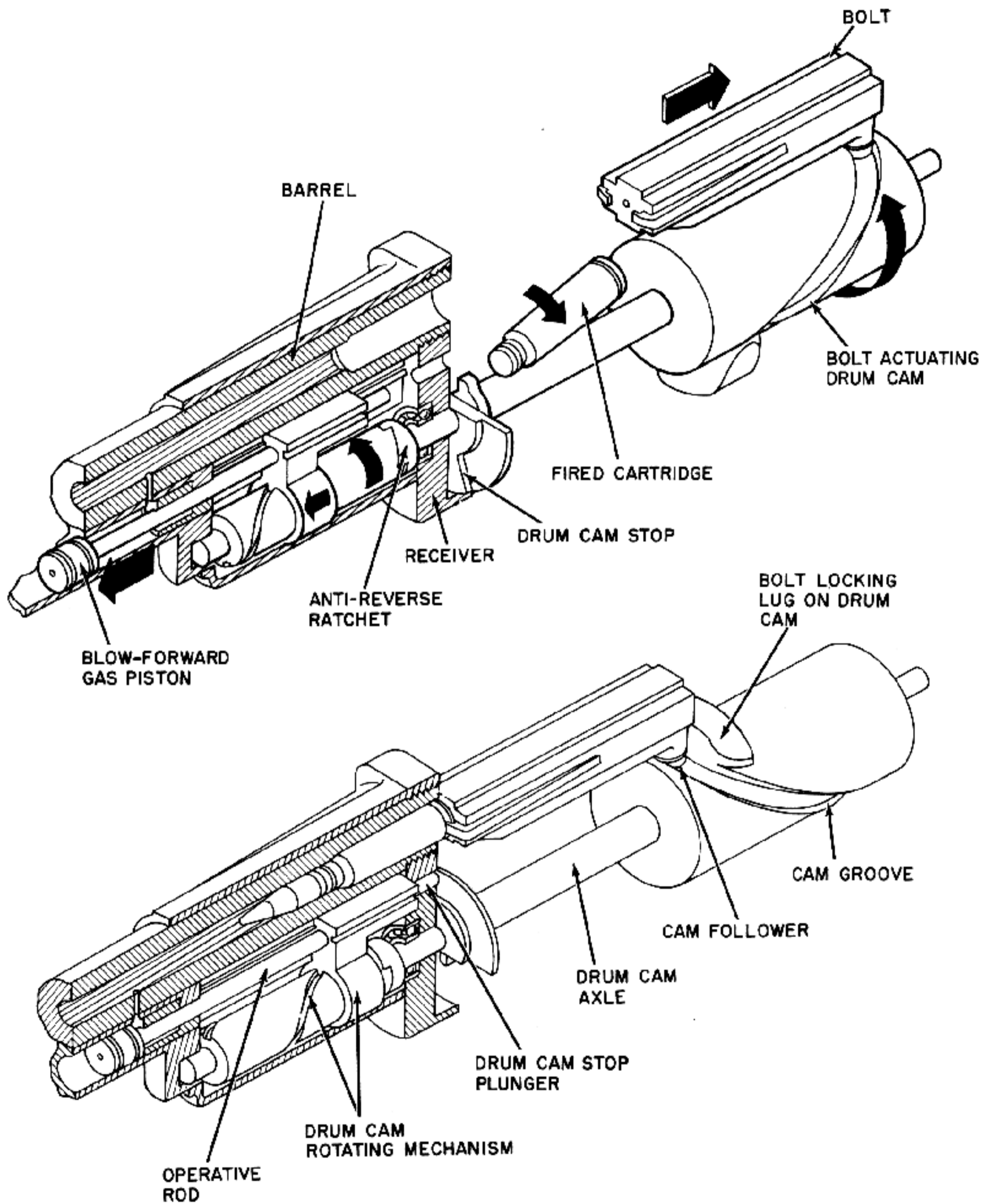
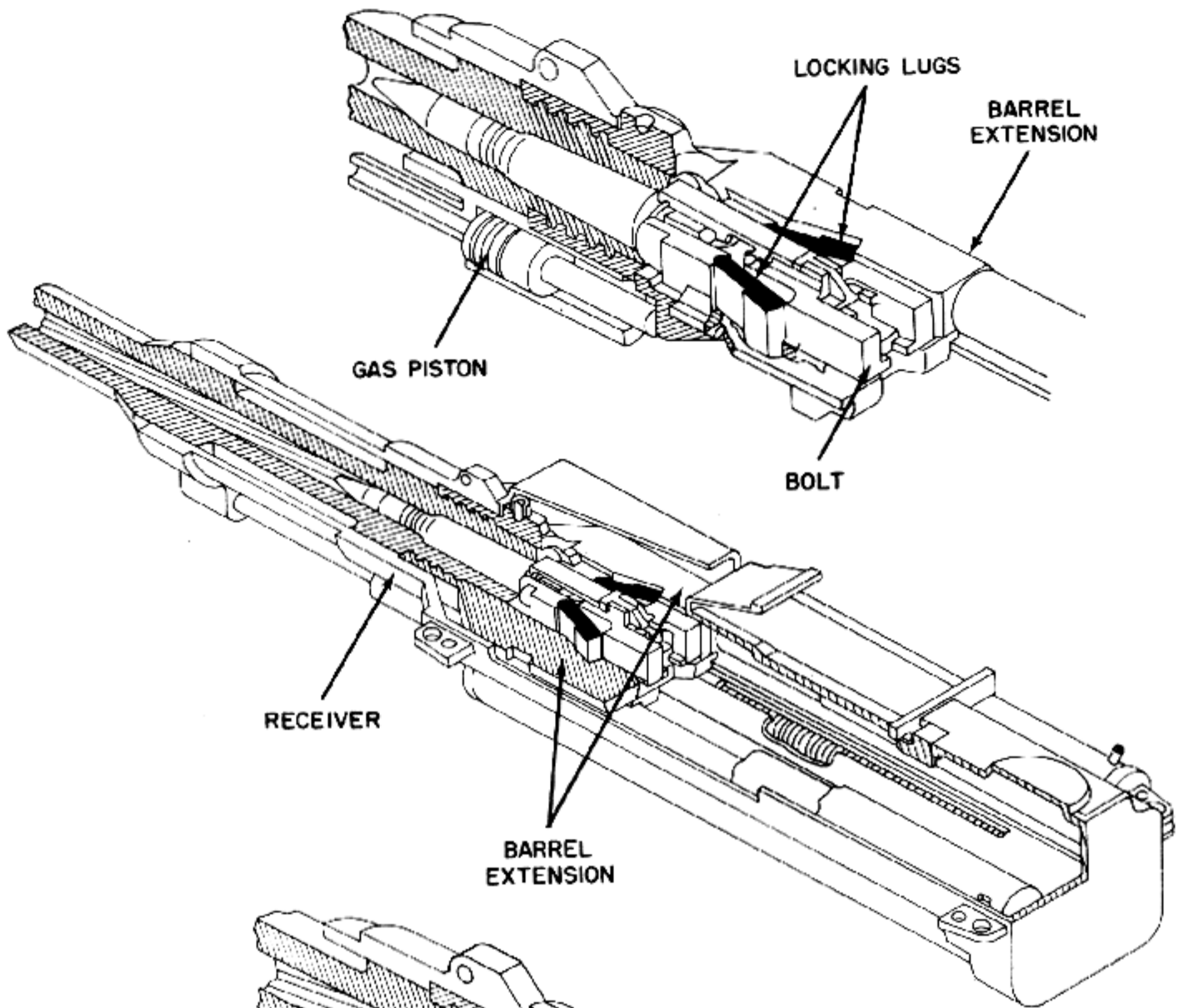


Figure 6-108. Rotating Drum Unlocks Bolt.

**A**



**B**

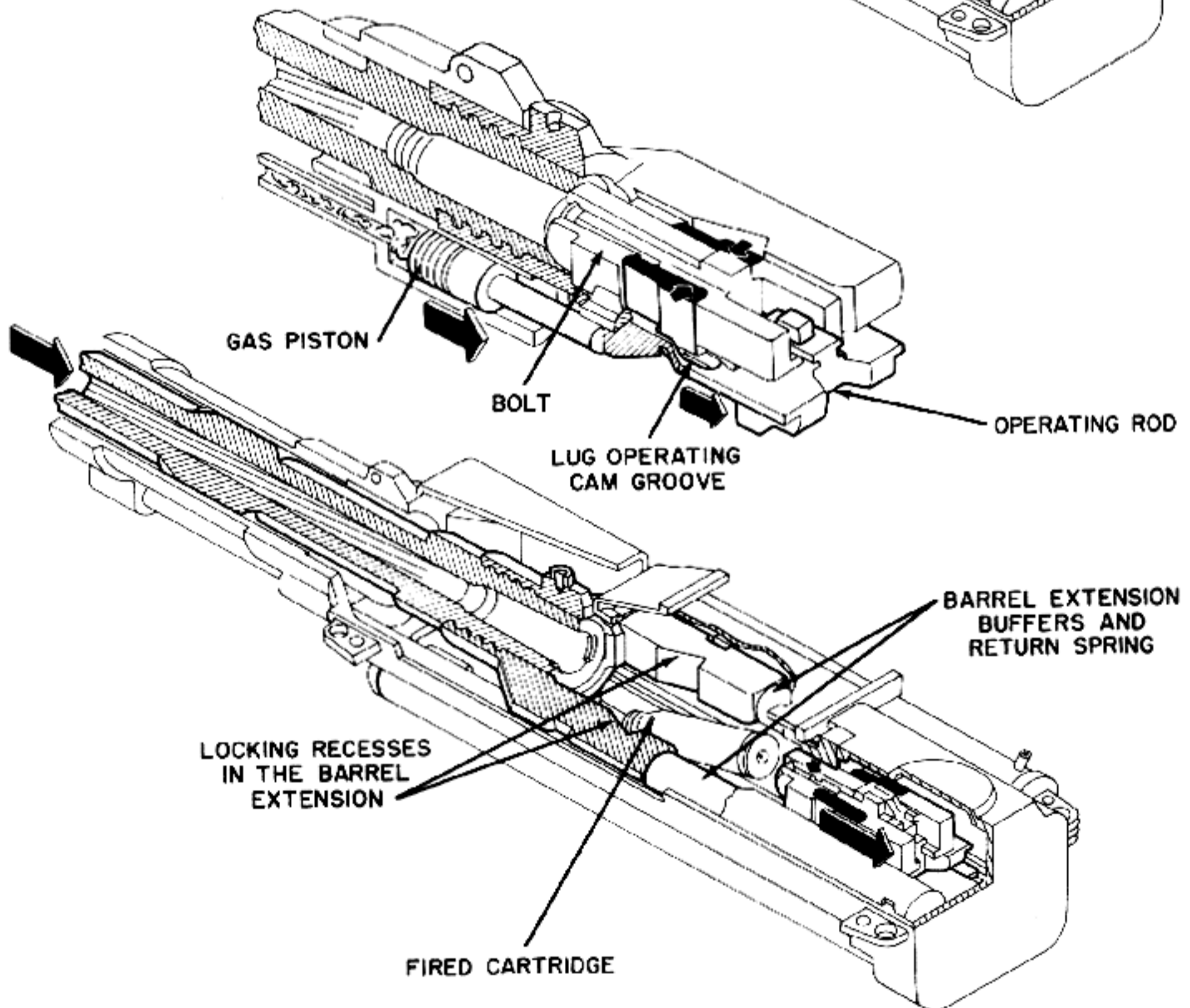


Figure 6-109. Cammed Surfaces on Operating Rod Unlock Locking Lugs From Barrel Extension.

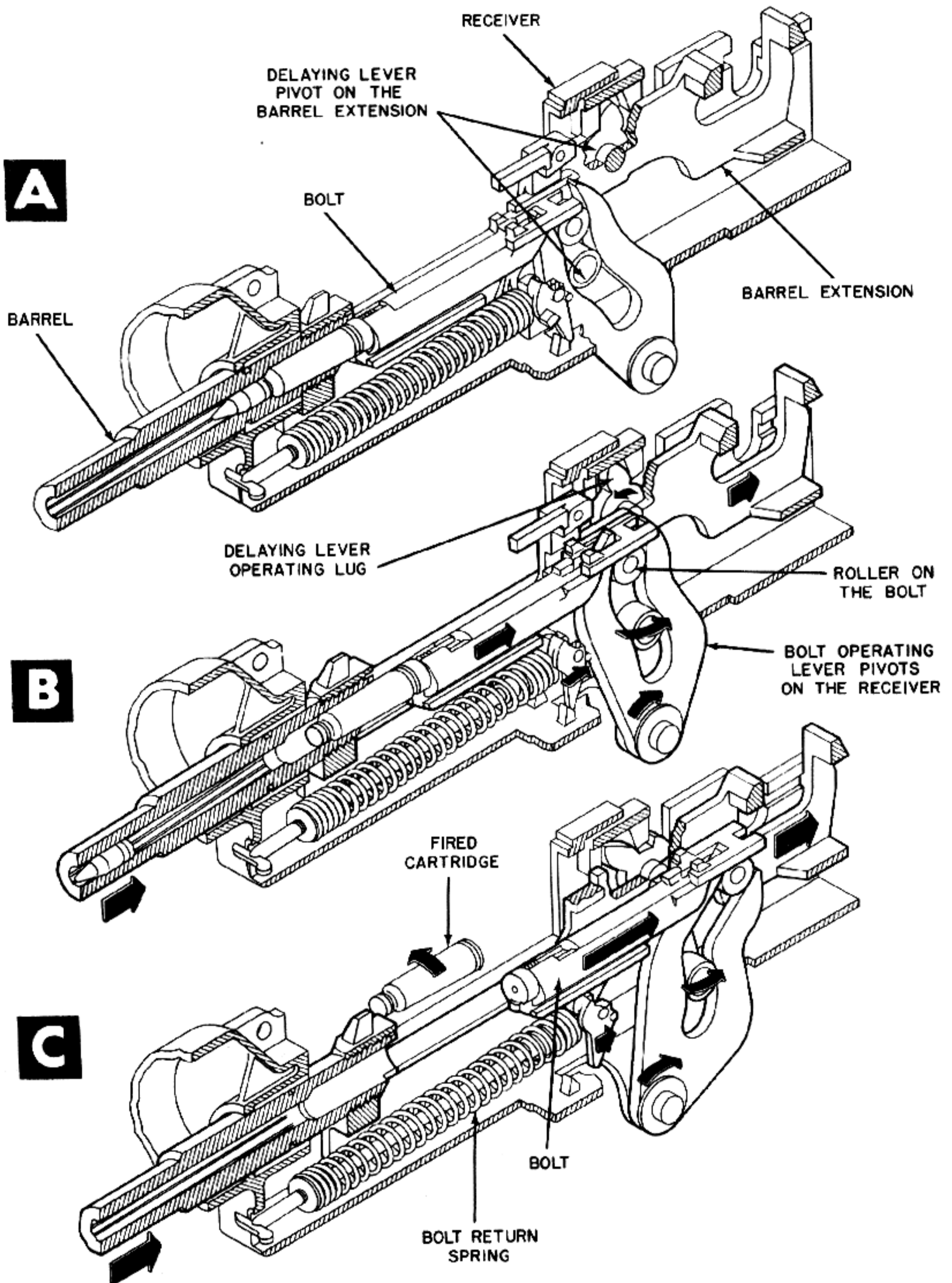


Figure 6-110. Unlocking Is Delayed by Action of Cams and Springs.



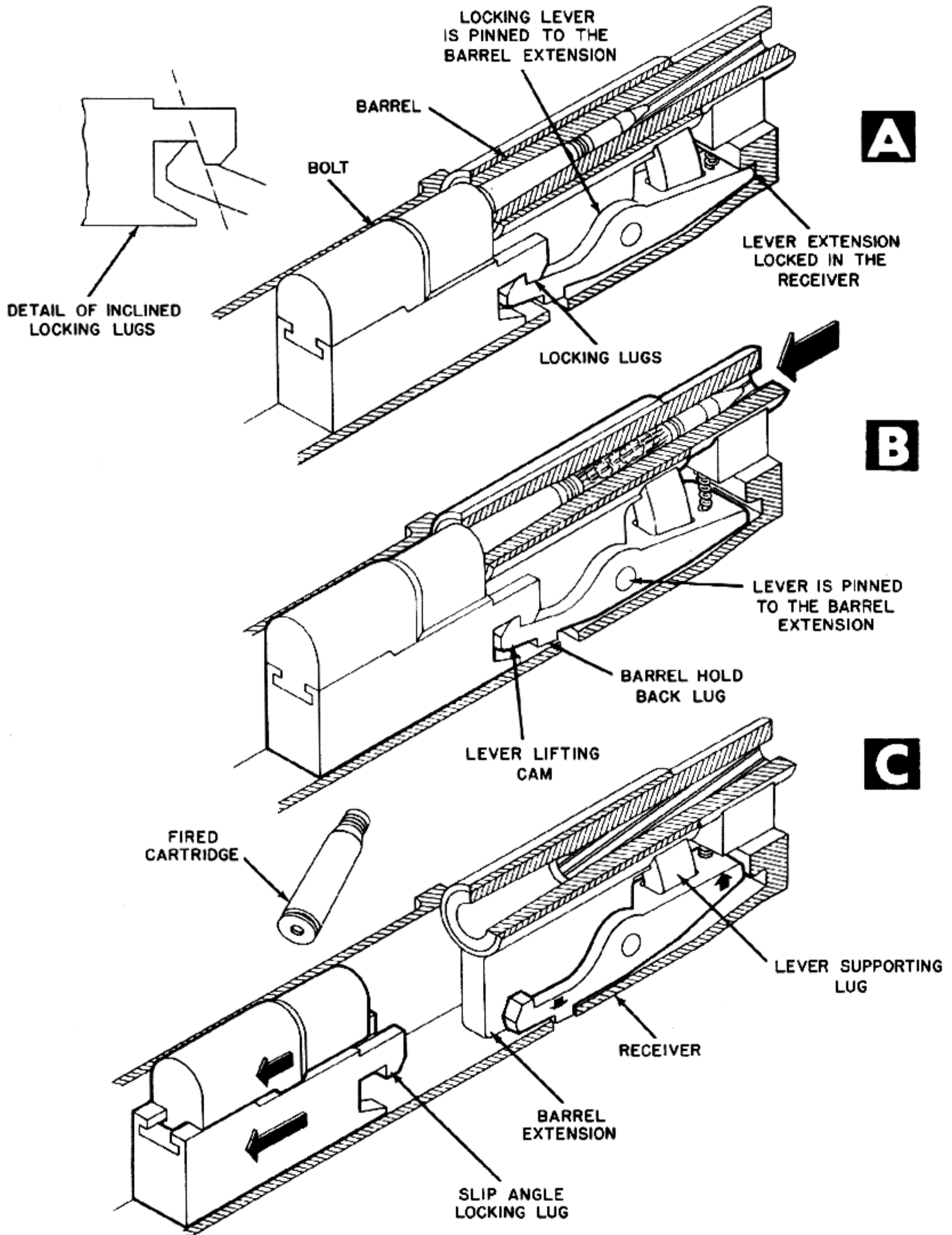


Figure 6-111. Lever on Barrel Extension Locks Bolt to Barrel.

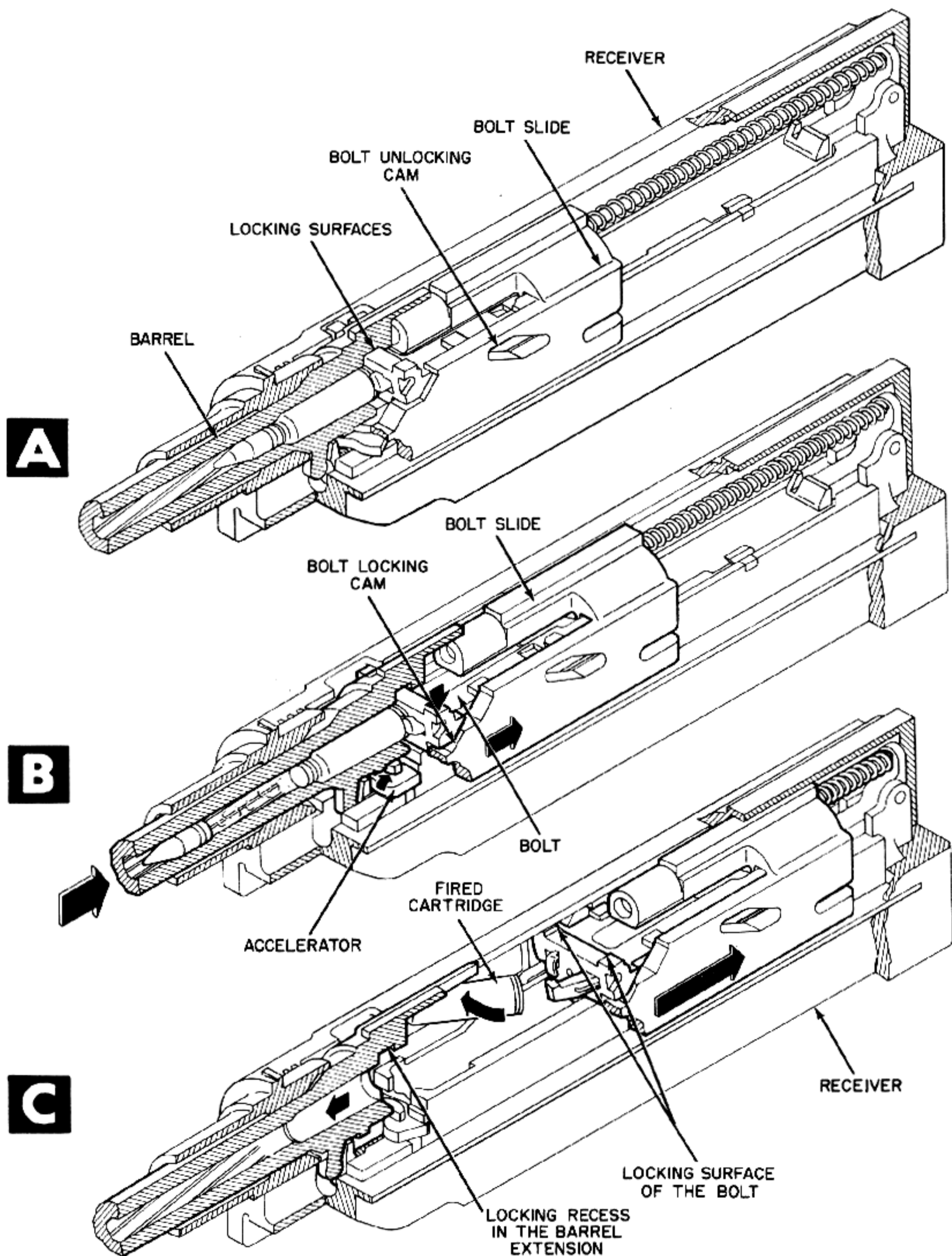


Figure 6-112. Recoiling Slide Cams Locking Lug Free of Barrel Extension.

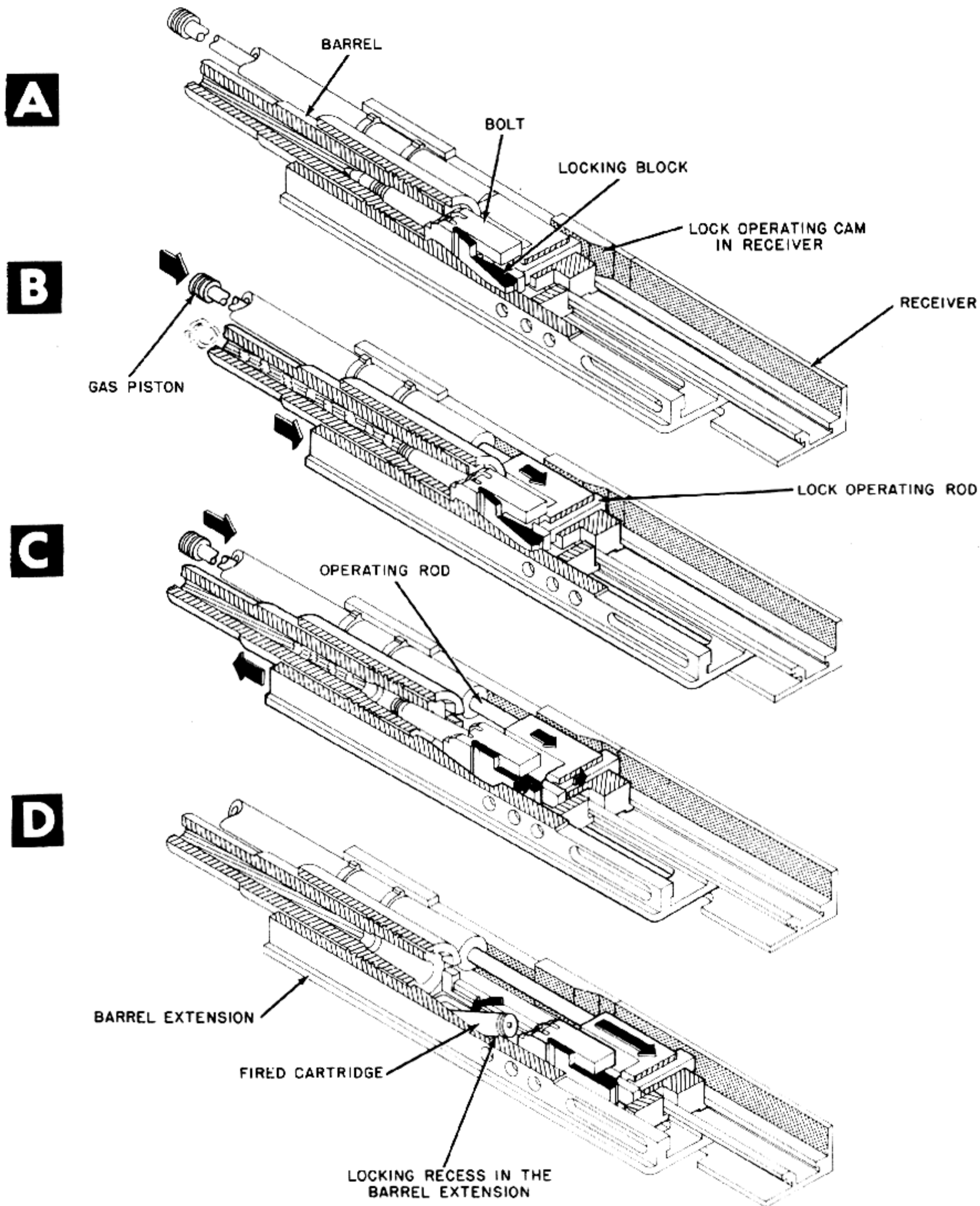


Figure 6-113. Operating Rod Removes Prop From Locking Lug. Gas Pressure Forces Locking Lug Free of Receiver.



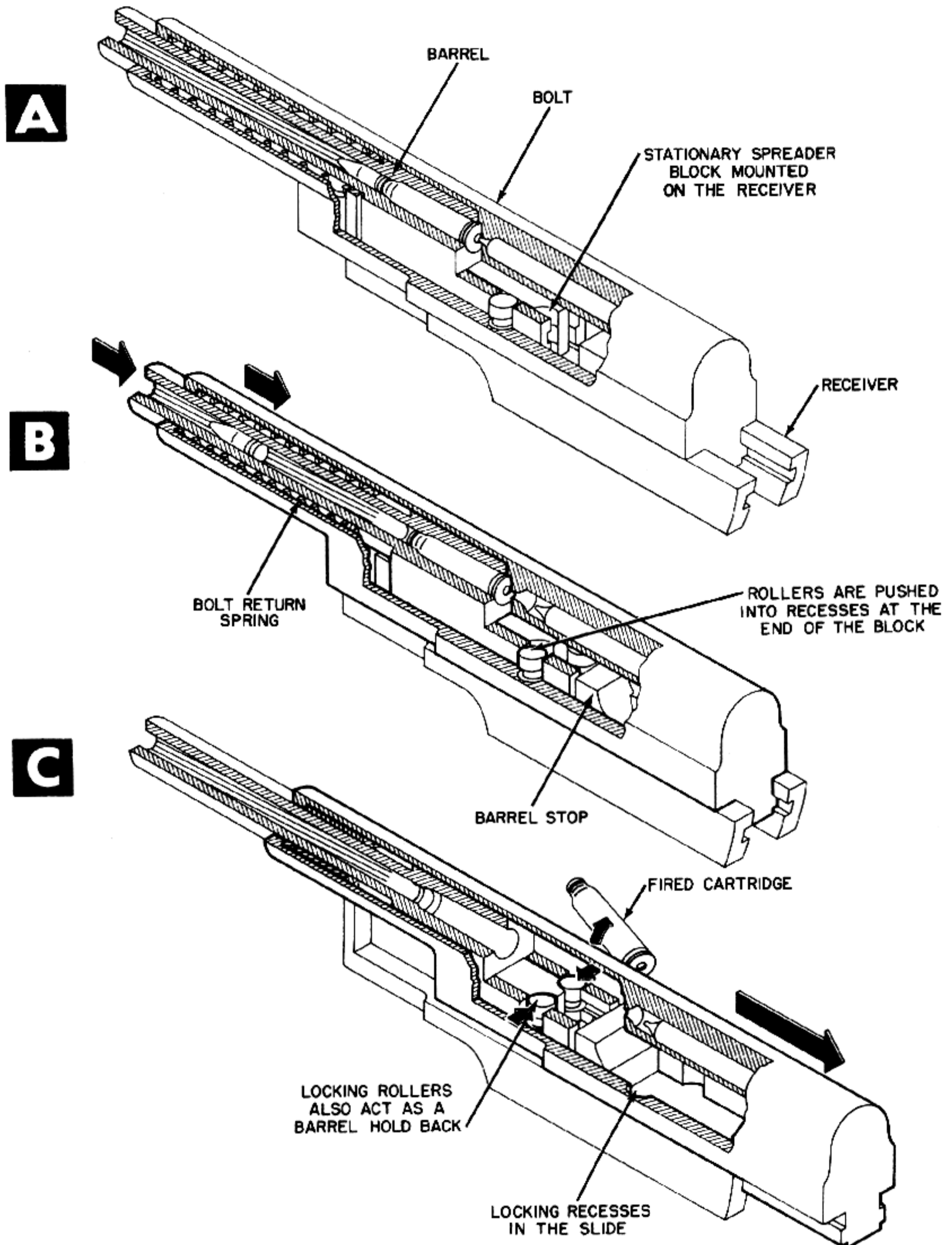


Figure 6-114. Bolt and Barrel Recoil to a Point Where Locking Rollers Are Forced Free of Bolt.

G. Caseless Cartridges

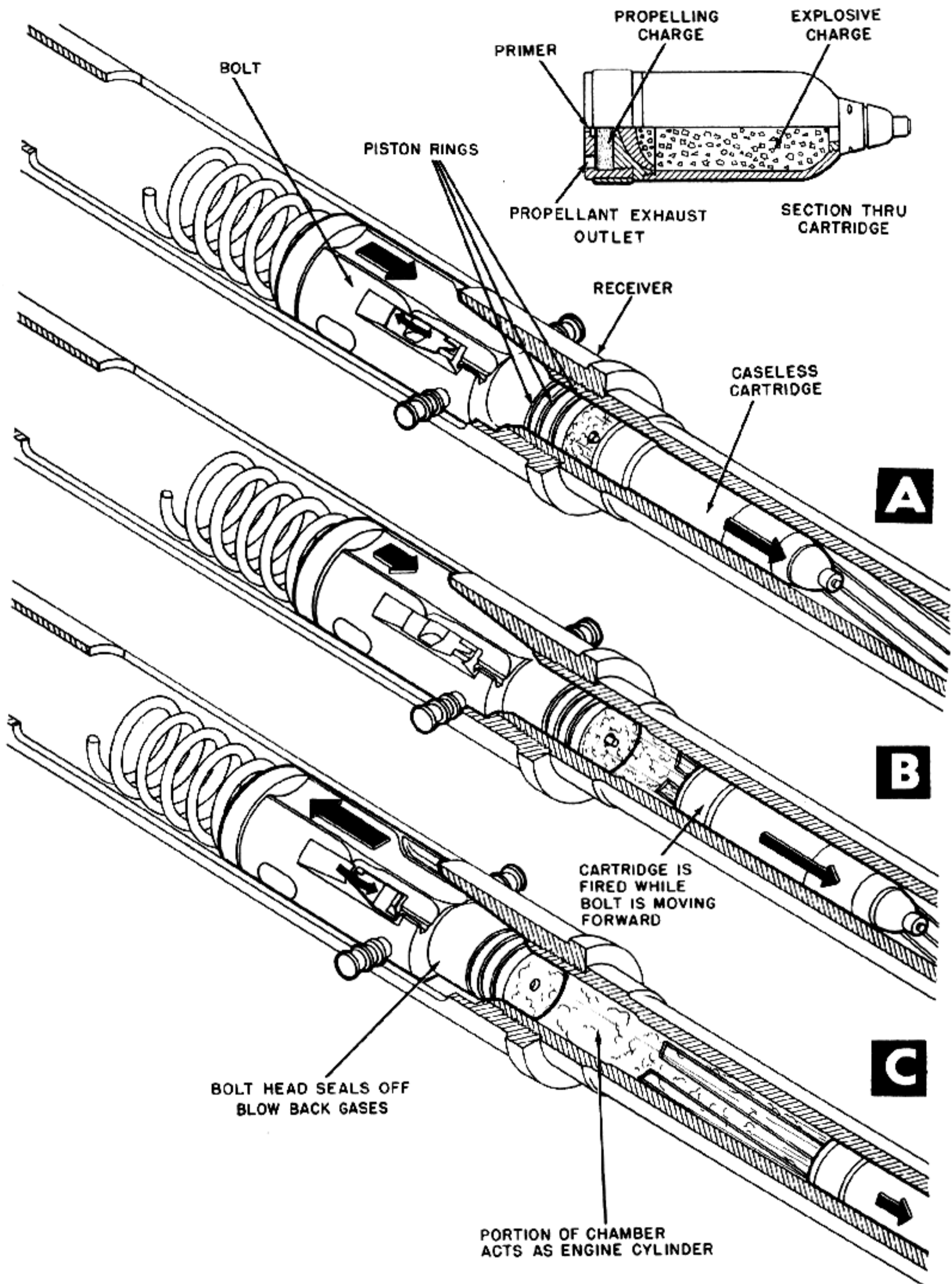


Figure 6-115. Piston Rings on Bolt Seal Bore. Complete Round Fired From Gun, Eliminating Extraction and Ejection.

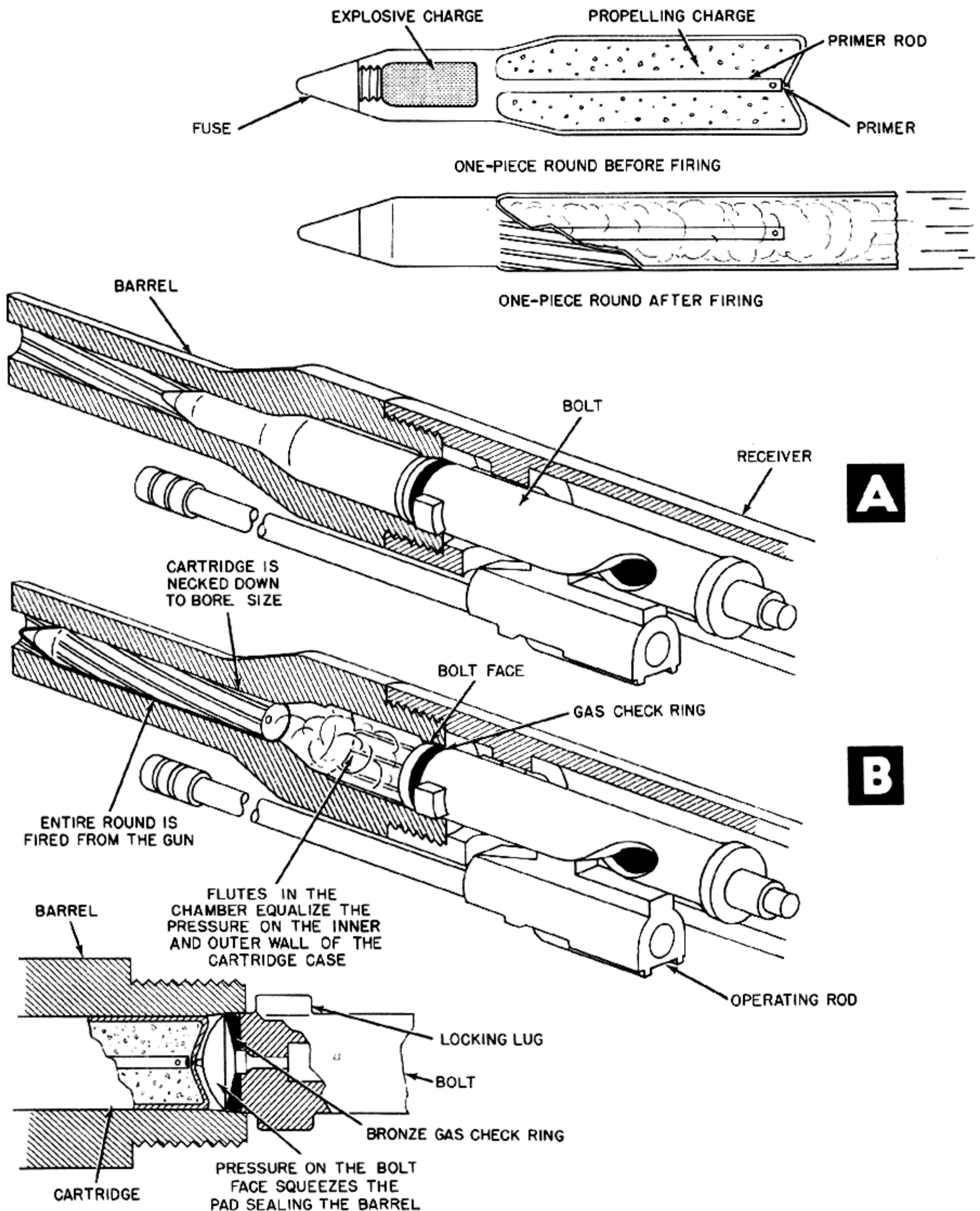


Figure 6-116. Gas Check Ring Seals Bore. Complete Round Fired From Gun, Eliminating Extraction and Ejection.



# ROTARY CHAMBER GUNS

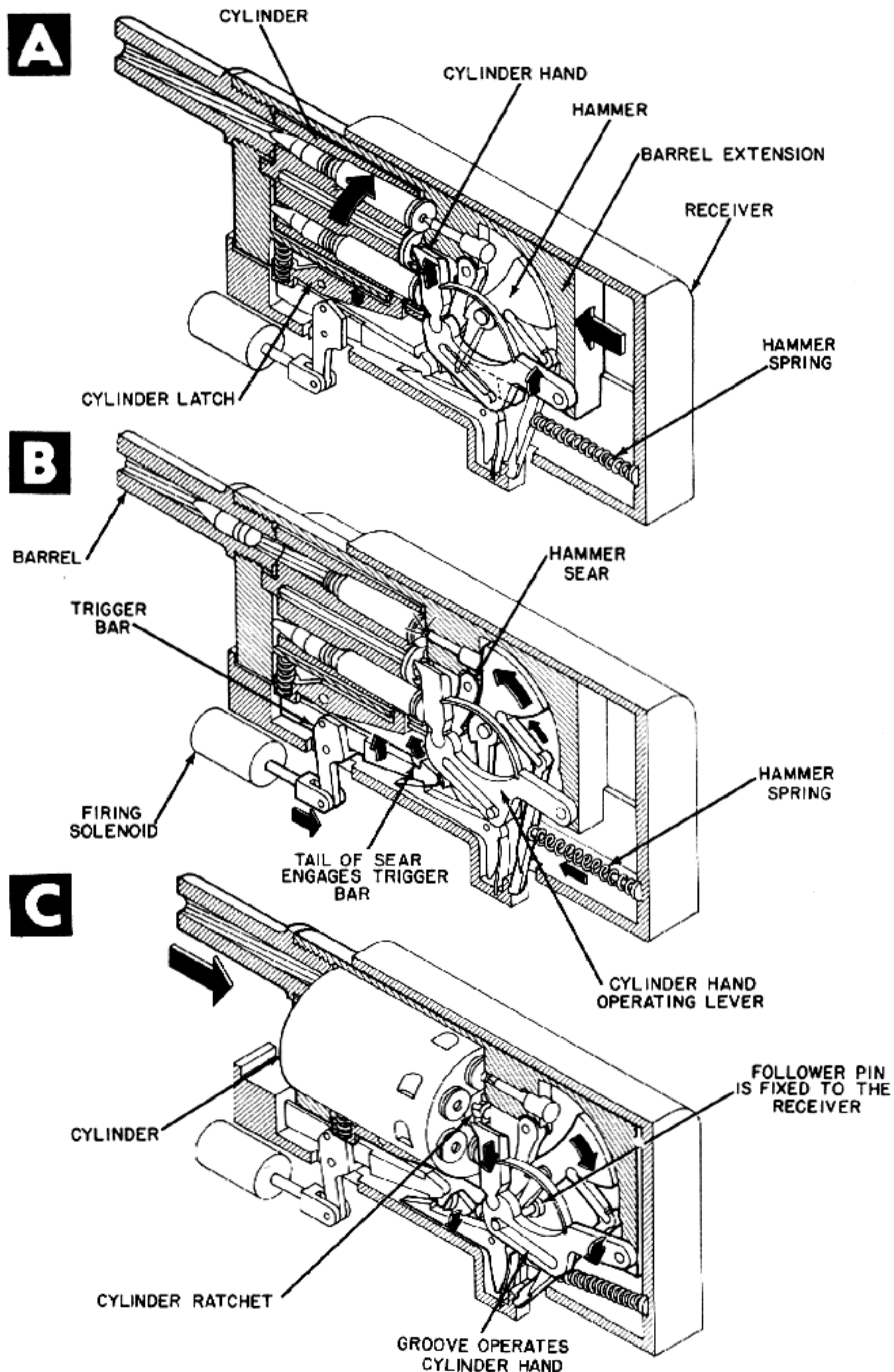


Figure 7-1. Operating Cycle of Recoil-Actuated Single-Barrel Rotary Cannon.

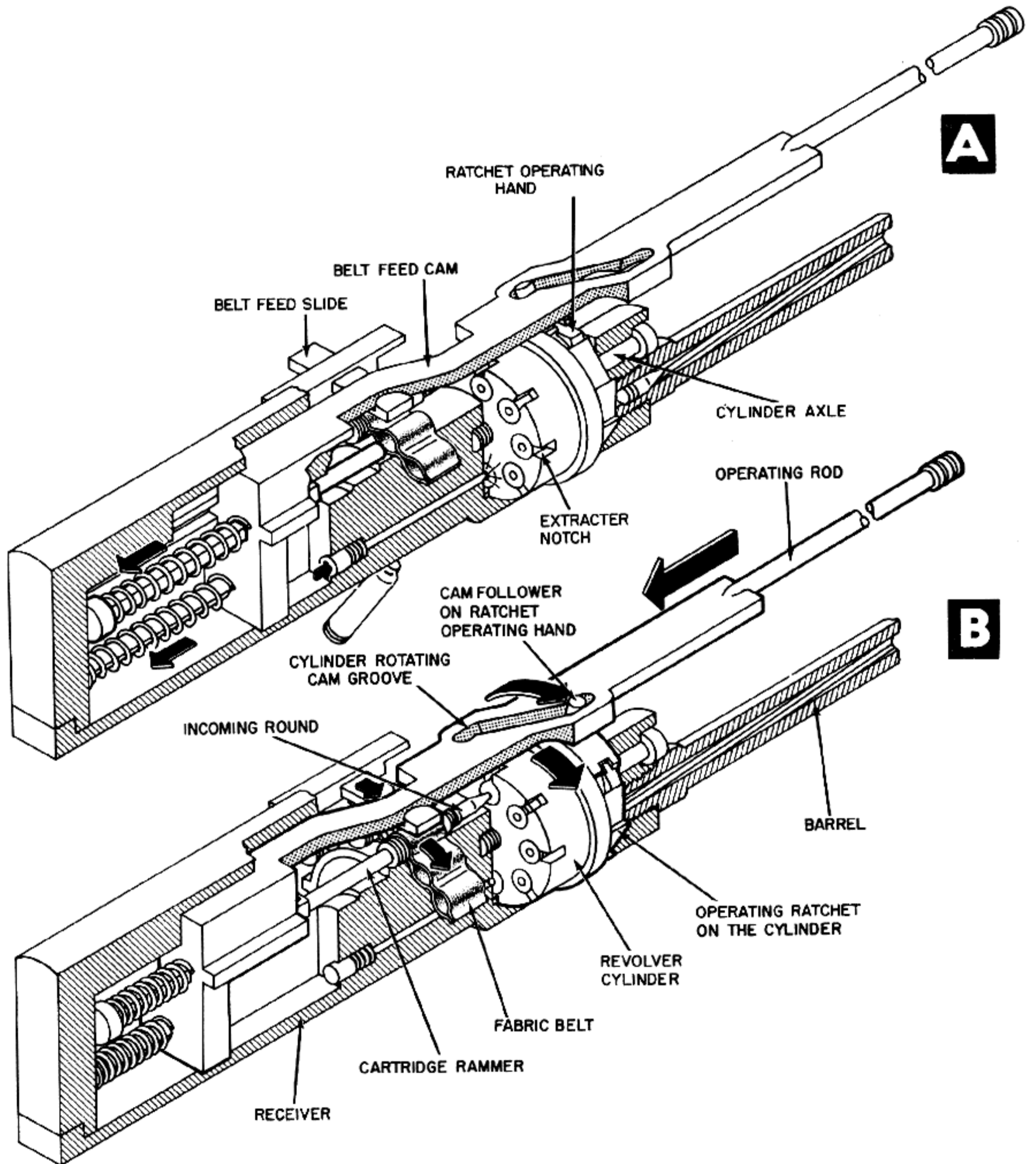
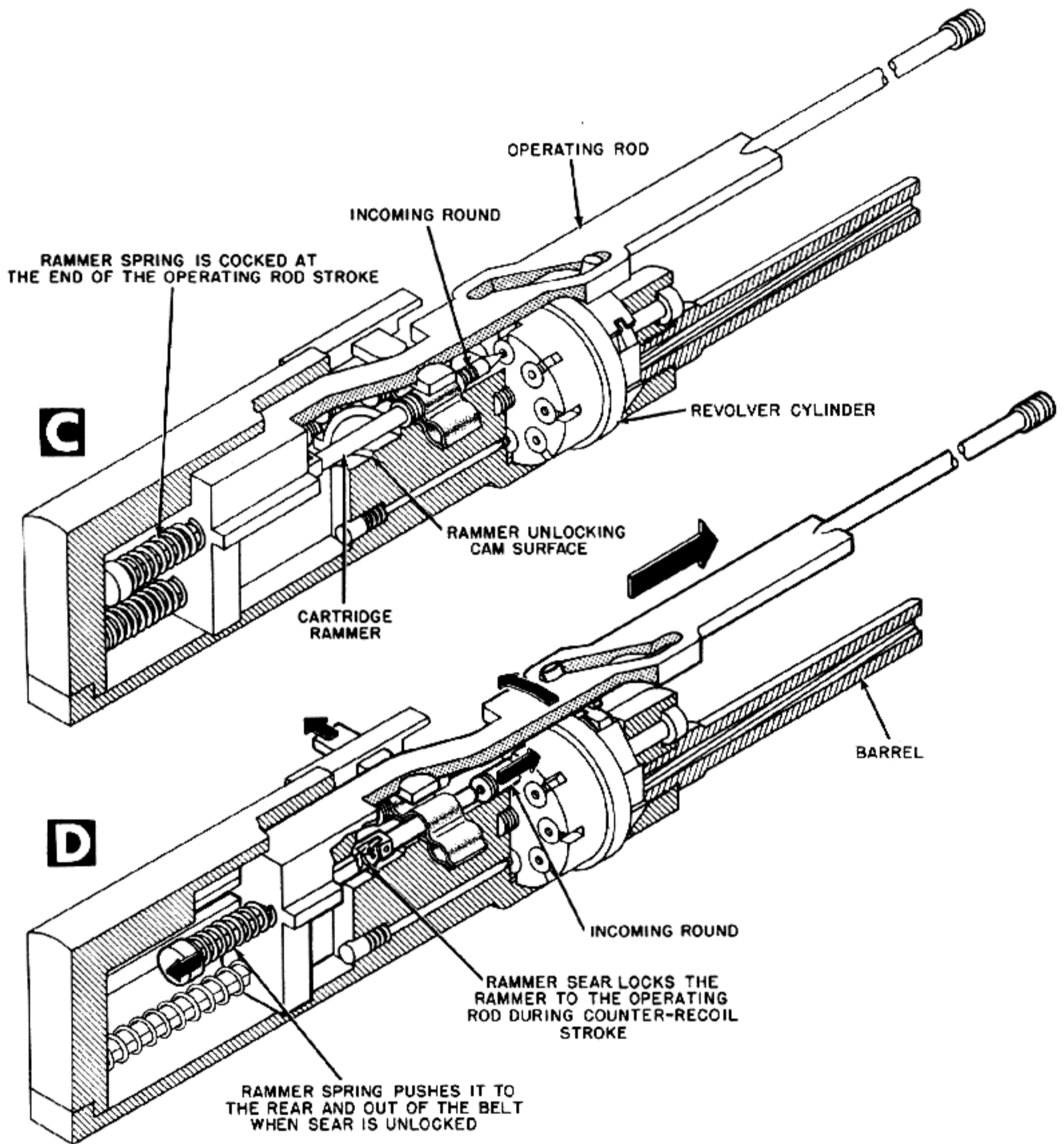


Figure 7-2. Operating Cycle of Gas-Actuated



Single-Barrel Rotary Cannon.



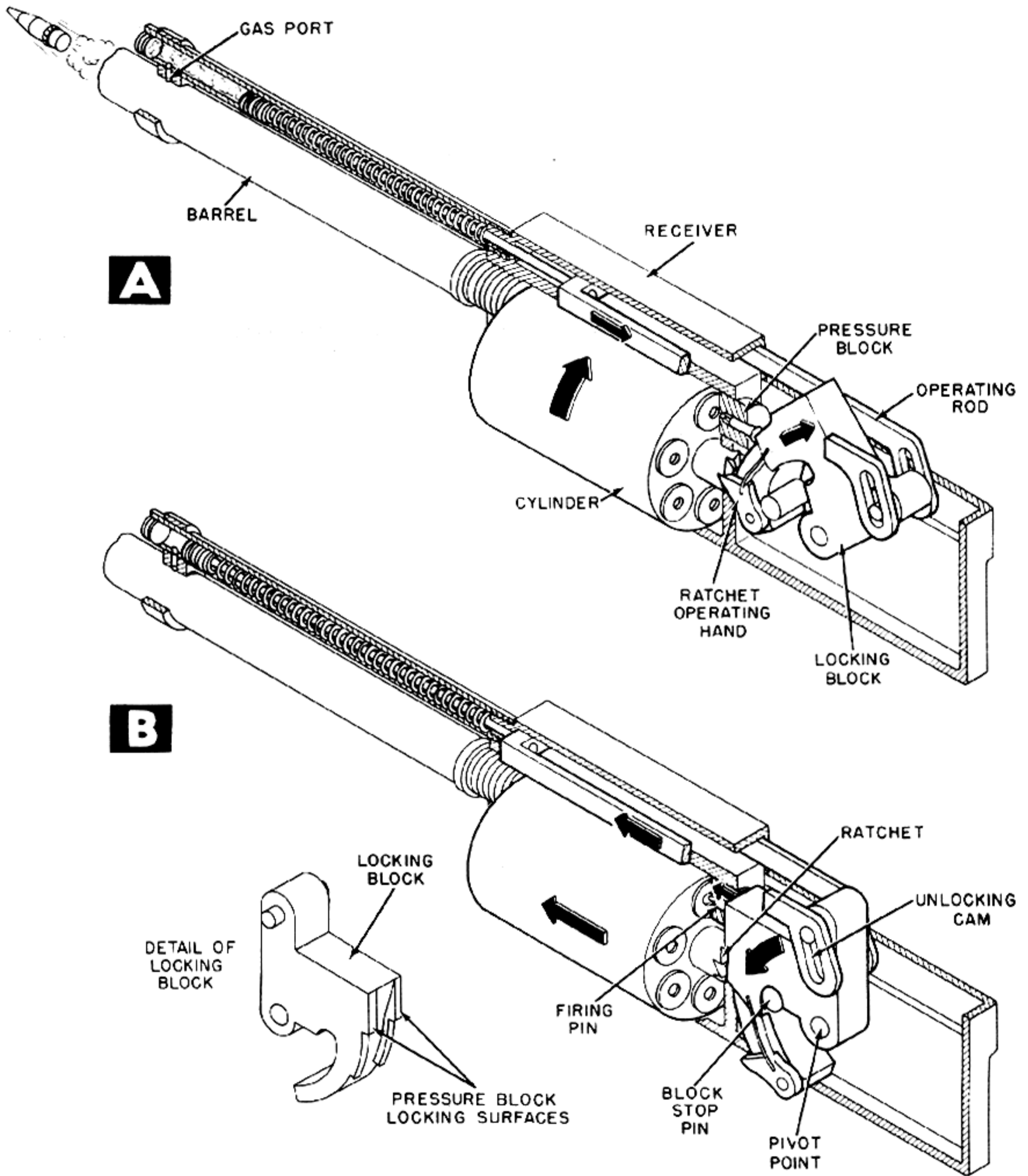


Figure 7-3. Operating Cycle of Gas-Actuated Single-Barrel Rotary Cannon. Action Locks Cylinder to Barrel.

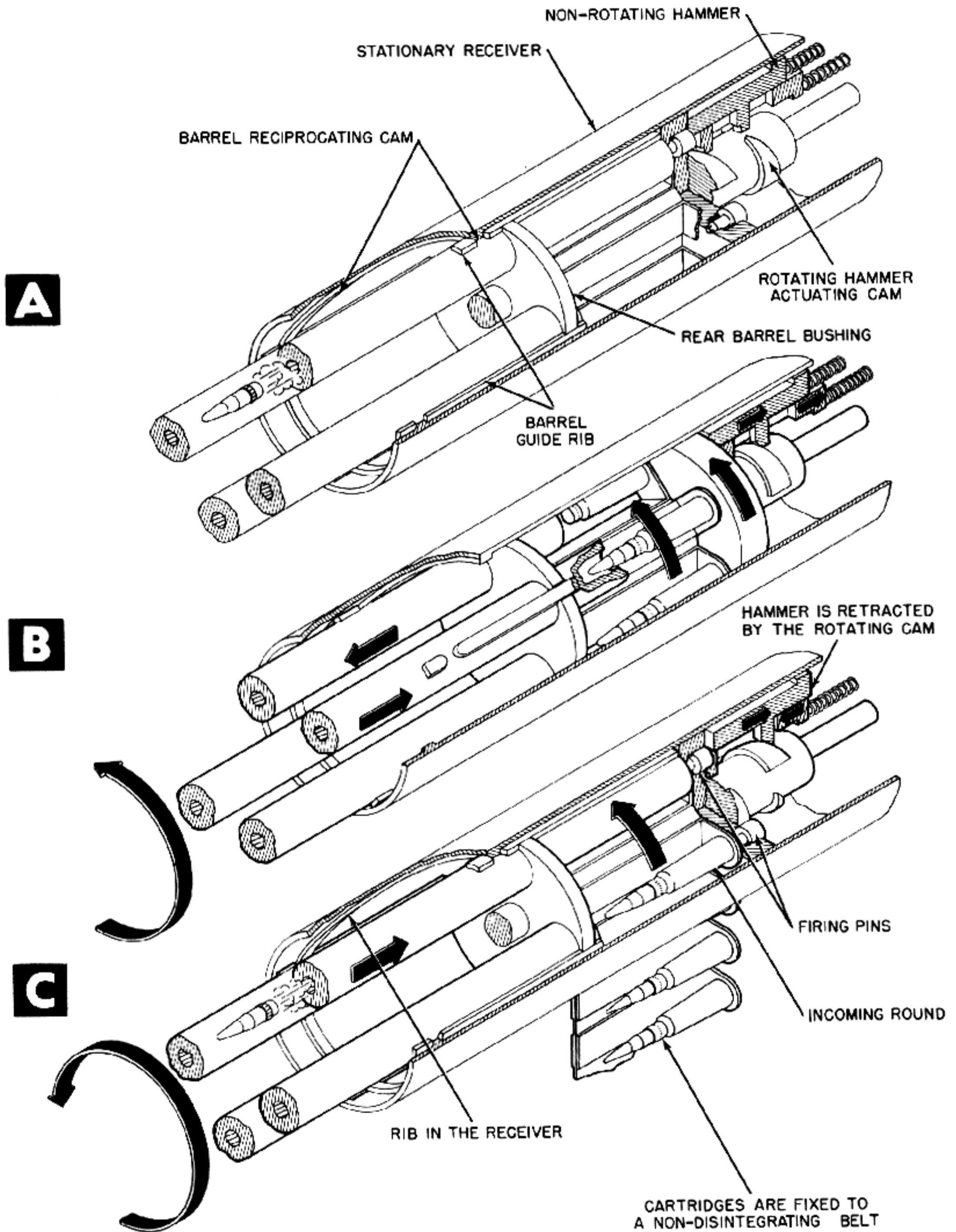


Figure 7-4. Operating Cycle of Multi-Barrel Rotary Cannon.

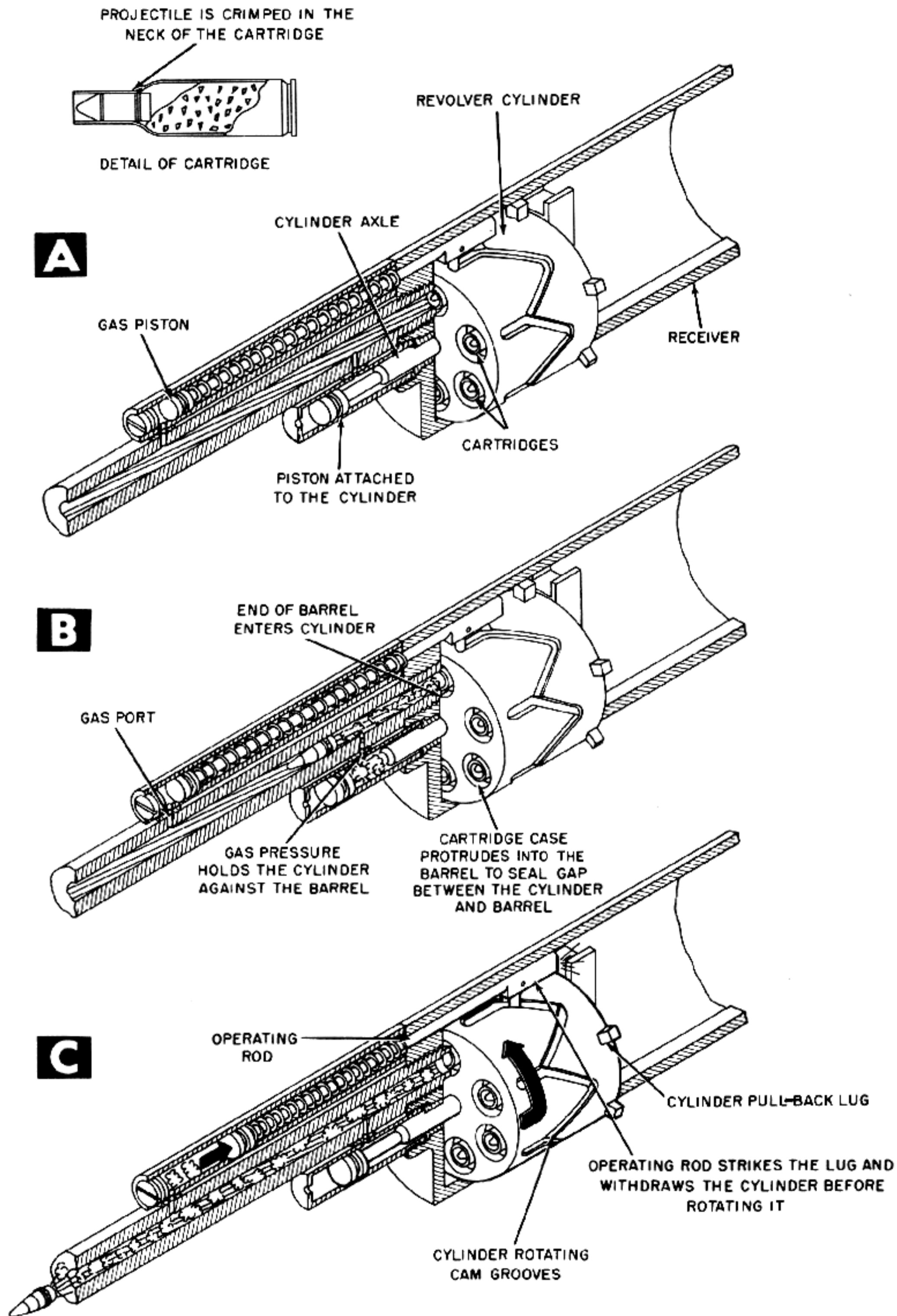


Figure 7-5. Operating Cycle of Gas-Actuated Single-Barrel Rotary Cannon. Gas Pressure and Cartridge Case Seal Bore.



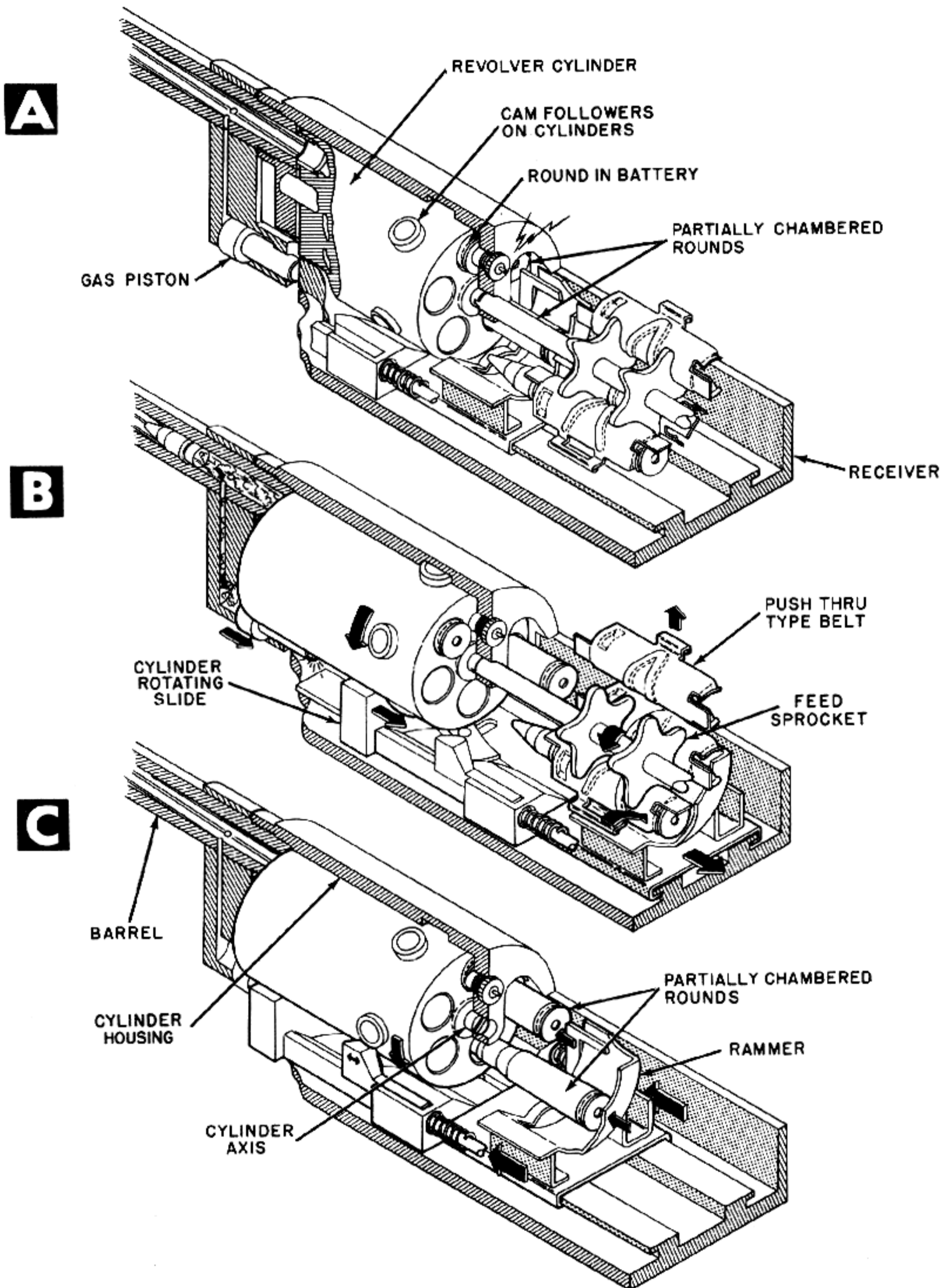


Figure 7-6. Operating Cycle of Gas-Actuated Single-Barrel Rotary Cannon. Bore Sealed by Obturating Ring.

# THE MACHINE GUN

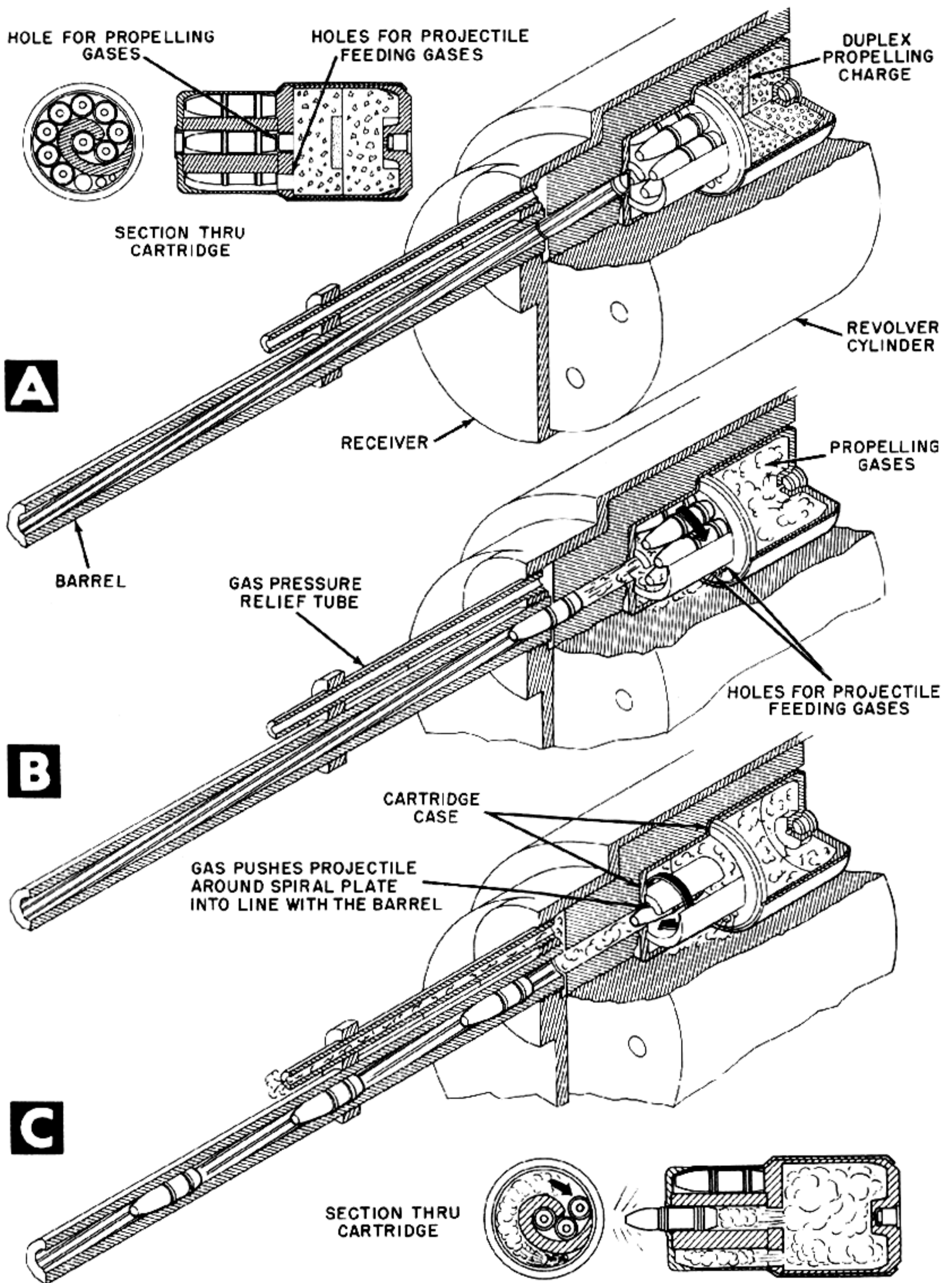


Figure 7-7. Method of Firing Multi-Projectile Loaded Round.



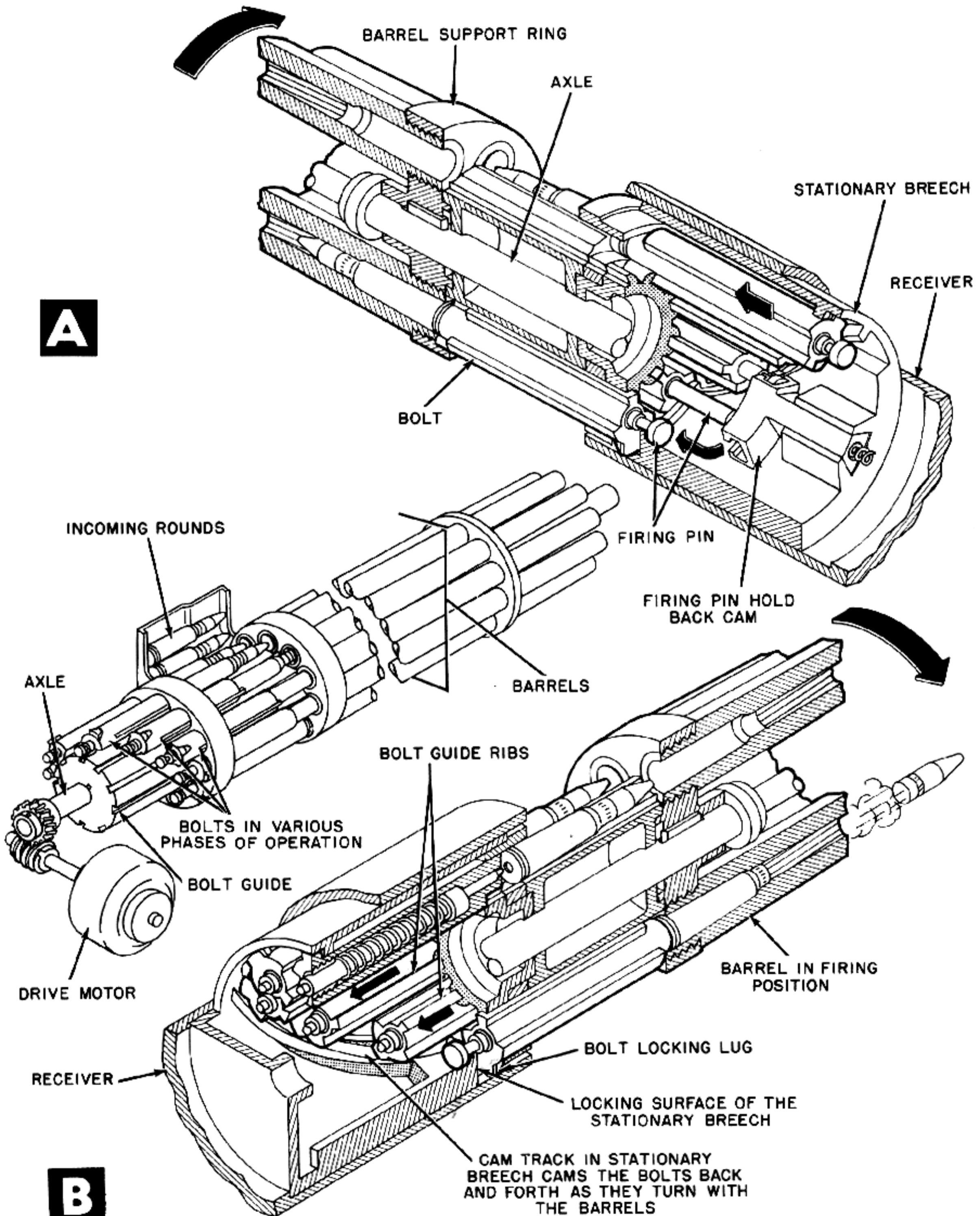


Figure 7-8. Operating Cycle of Multi-Barrel Motorized Rotary Cannon.



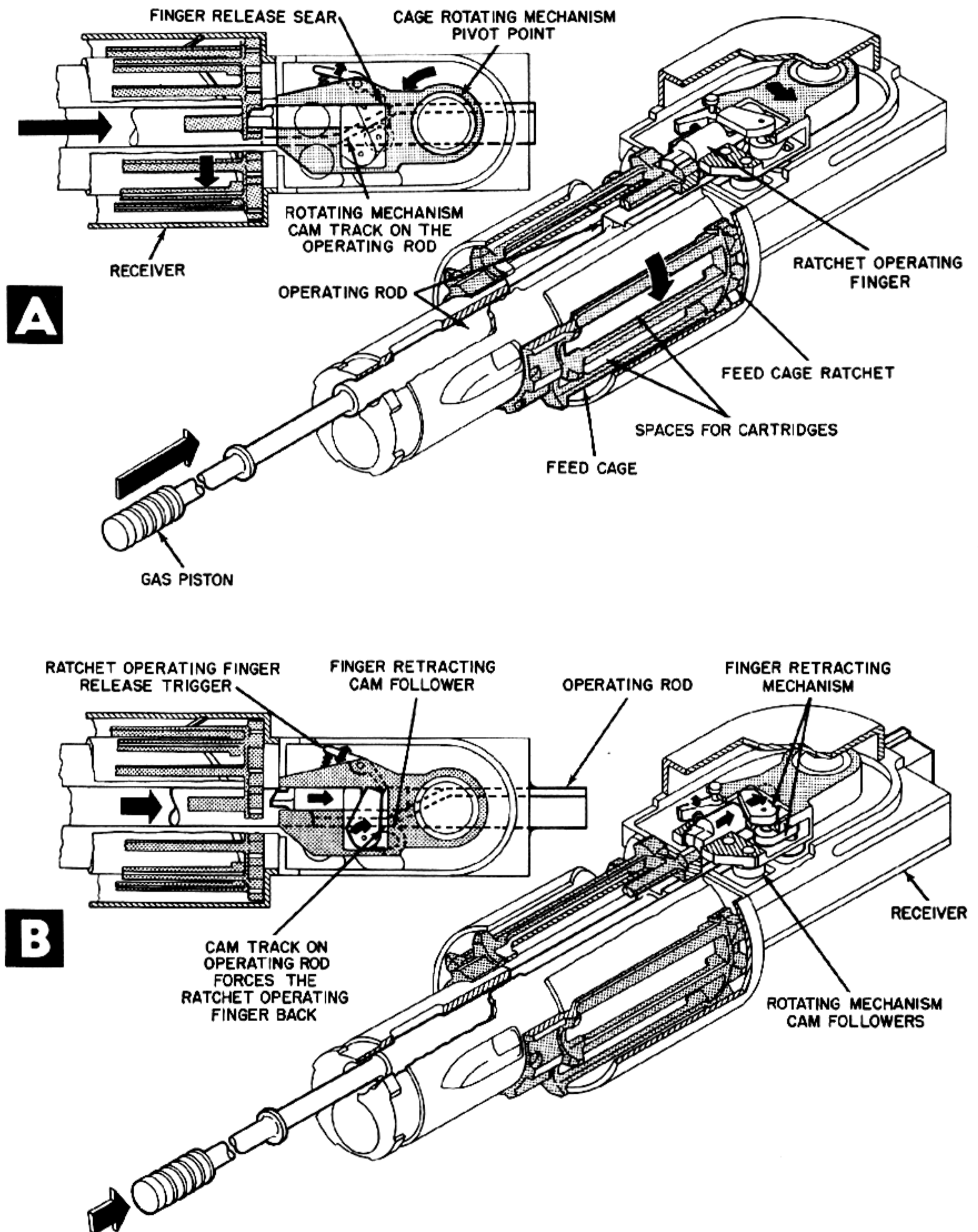
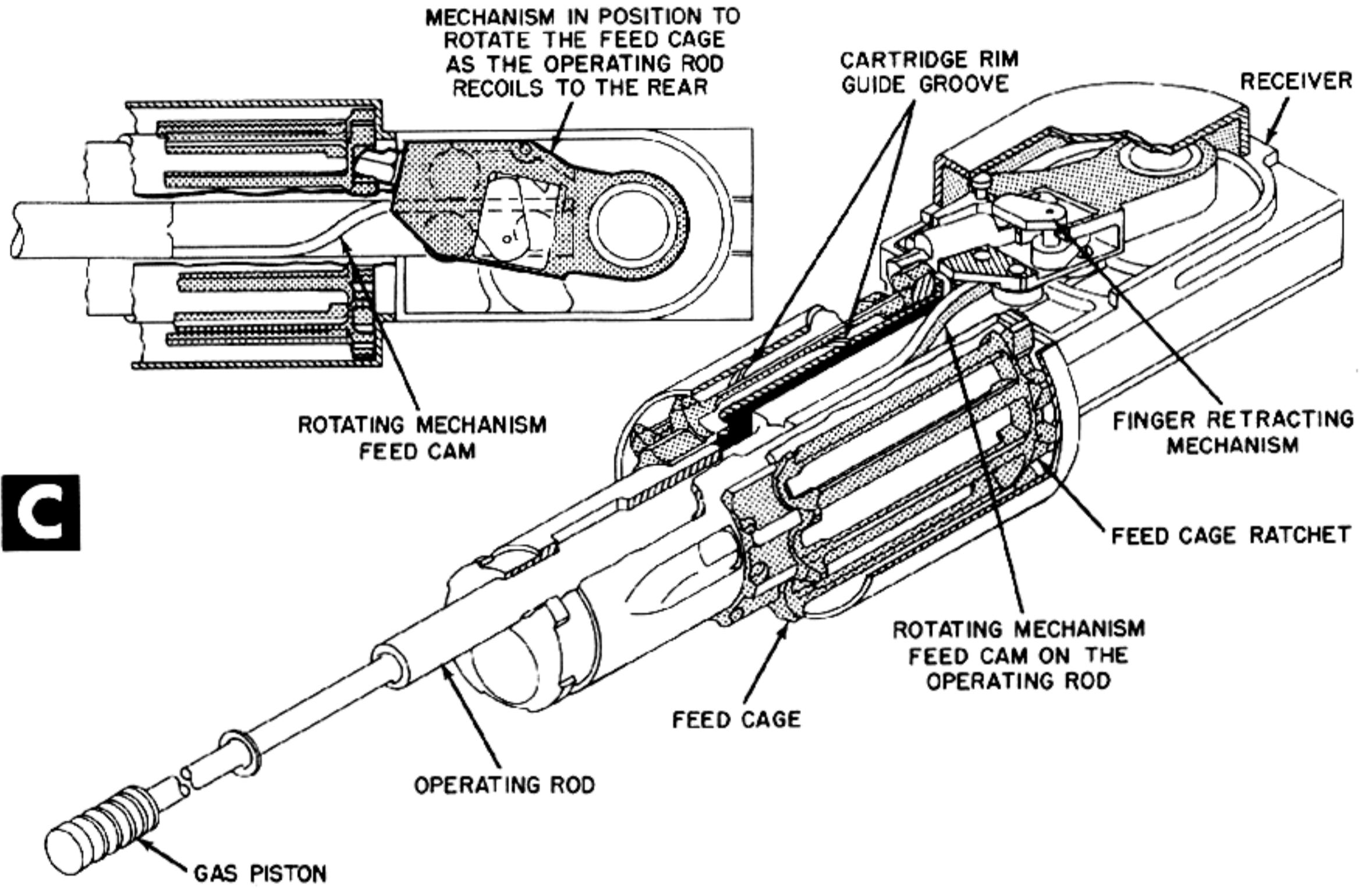


Figure 7-9. Mechanism for Revolving



Rotary-Type Feed.

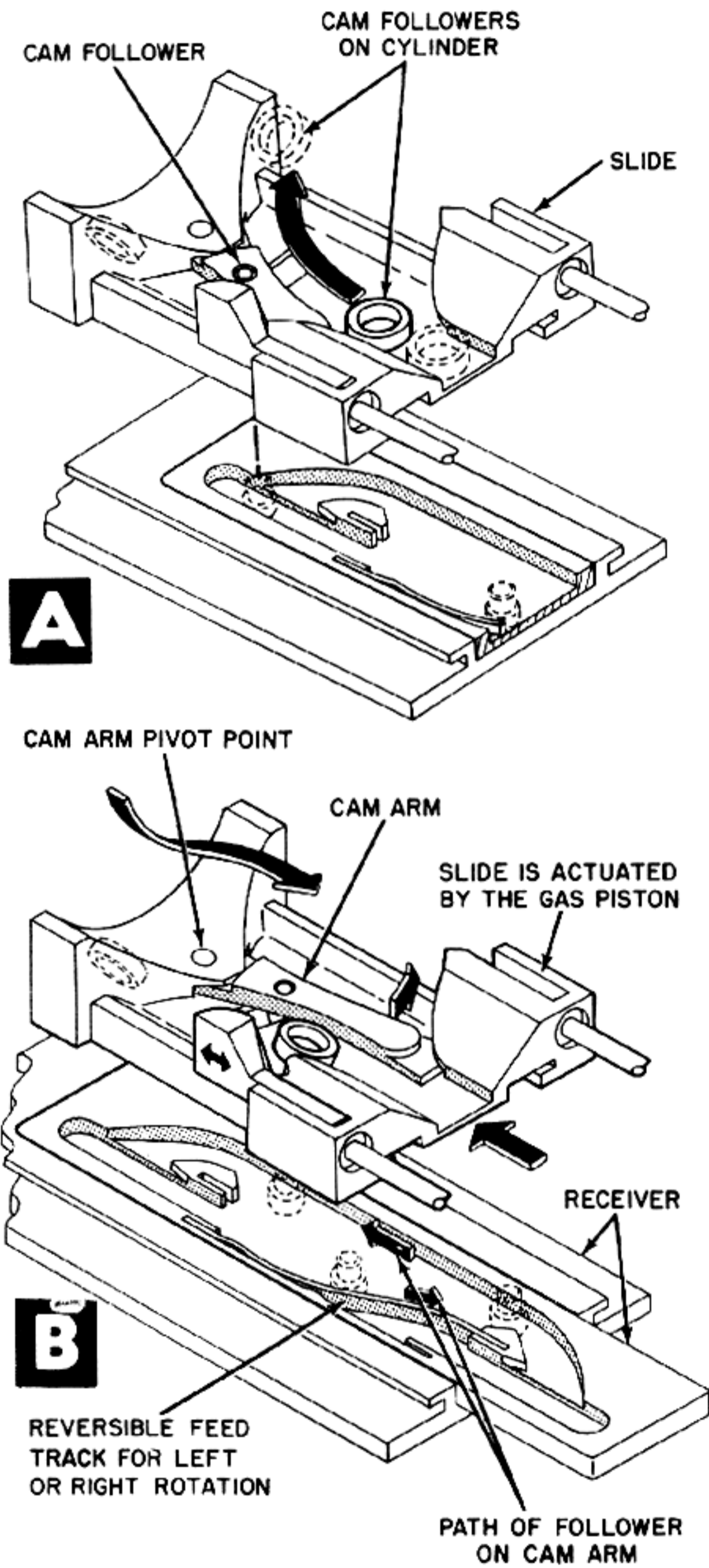


Figure 7-10. Method of Revolving a Rotary Cannon Cylinder.

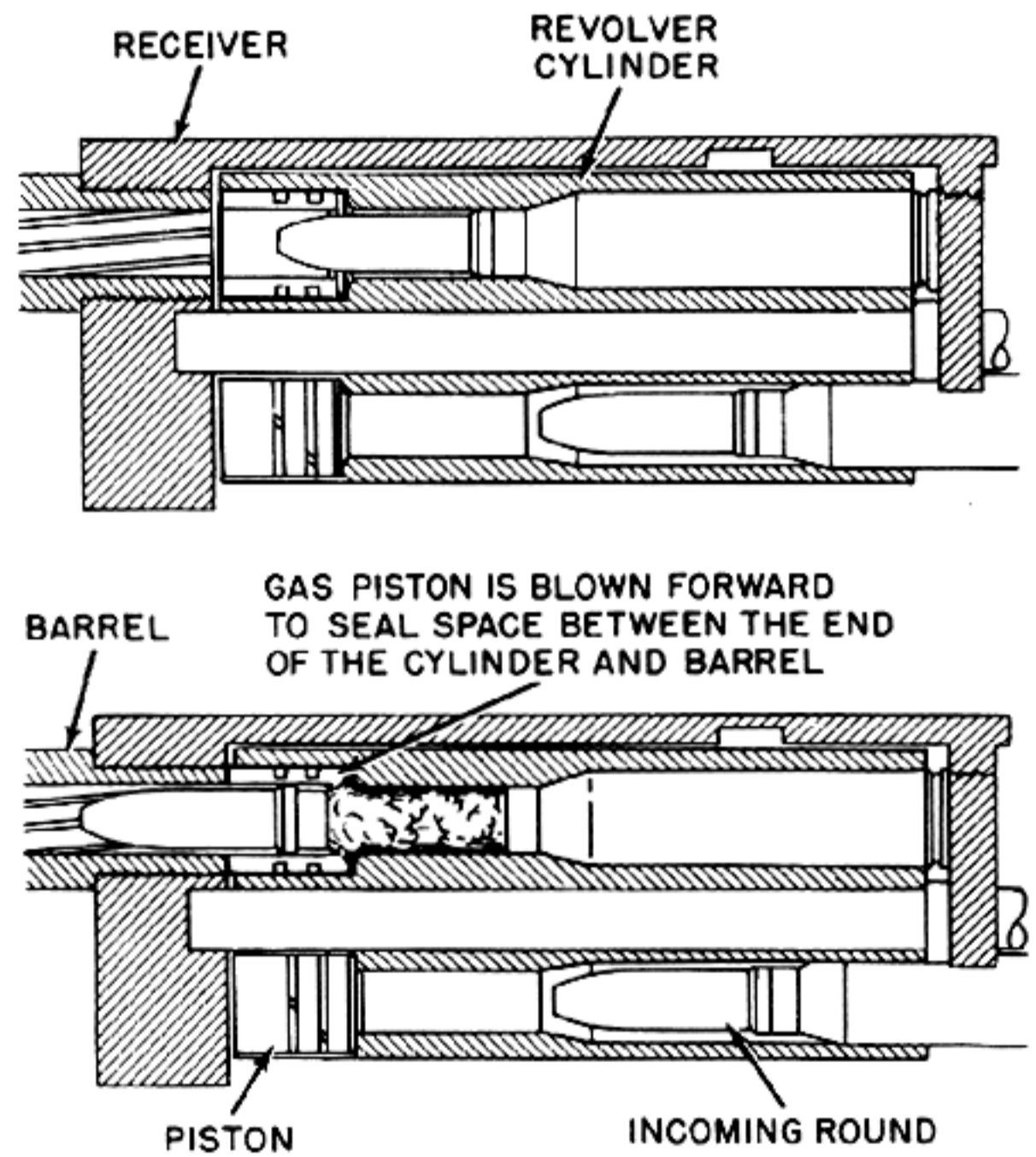


Figure 7-11. Method of Sealing Bore on a Rotary Cannon.