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PROPOSED MODIFICATION - L1A1 RIFLE

1. The rough sketches submitted by Staff Cadet LOUGHREY have been studied as far as was possible from the persimonious information supplied thereon, and a number of observations have been made, but before any further effort is put into this proposal, details would be required of the following:-
2.
  - i) Trigger Mechanism.
  - ii) Safety Devices.
  - iii) Holding Open Sear.
  - iv) Cocking Handle.
  - v) Return Spring.
  - vi) Striker Mechanism.
3. Furthermore details which at this stage are considered unacceptable are:-
  - i) Omission of the Safety Sear - this is a vital component as it is the only means of preventing the weapon being fired prior to the locking of the breech block.
  - ii) The proposed "Bull-pup" style of the weapon is such that the firer's face is directly adjacent to the ejection port with subsequently high probability of injury to the eyes from gas and propellant residue on ejection of the fired case.
  - iii) The above feature precludes the use of the weapon by left-handed shooters.
  - iv) Any premature ignition of a round would invariably result in very serious if not mortal injuries to the firer.
  - v) There is no evidence of a safety device which secures both the trigger mechanism and the breech bolt ass'y.
  - vi) The trigger mechanism ass'y appears to be separate from the body of the weapon, mounted in some manner on the hand guards, this may prevent adequate control of the sear, possibly resulting in a runaway gun.
  - vii) The positioning of the trigger mechanism housing is impractical if for no other reason than the fact that it will require the firer to remove his hand from the pistol grip to change magazines, it also allows insufficient space to grasp the pistol grip quickly and comfortably.
  - viii) Absence of the Block Housing removes the limiting face for the rearwards movement of the carrier and breech block ass's. It is not acceptable to have the coil springs operate 'solid' in compression to provide this limit to rearwards movement.
  - ix) There appears to be no mechanical feature which will prevent the

/'tail'

3. ix) (Cont)  
'tail' on the firing mechanism from overtaking the carrier ass'y and striking the firing pin prior to the locking of the breech block.
- X) The carrying handle is inadequate in that it will only permit the use of two fingers.
- xi) The foresight in its present form would be subject to damage.
- xii) The body cover ass'y is apparently easily unlatched and subsequently renders the weapon inoperative if lost or damaged.
- xiii) The existing L1A1 rifle employs a double helical coil spring mounted in the butt to provide a means of returning the carrier and breechblock, strip a cartridge from the magazine, chamber it and lock the action.  
It is not readily apparent how this is to be achieved in the ass'y shown in the sketches.

4. In conclusion, it should be made clear to Staff Cadet Loughrey that firstly, a written description of the complete weapon, its method of operation in correct sequence, special features and advantages should be prepared. Drawings (NOT sketches) should be produced - these must be fully dimensioned showing all tolerances, materials, heat-treatments and surface finishes etc., all in accordance with accepted engineering standards.

5. It is my own considered opinion, from the information submitted, that this proposed modification to an L1A1 rifle is both unsafe and highly impractical, and any further time of effort expended on this project would be unwarranted.

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