BRIEFING **RELEASE MECHON** 10.15.93

EXPAND KNOWLEDGE

AVOID DISPARAGING ← DISCOVERABLE INFO.
ON CURRENT PRODUCTS. NOT: BAD TO GOOD
now excellent → moving toward perfection

(2) PROVIDE A FORUM TO DISCUSS FEATURES OF NON DESIGN
(1) SHARE SOME INFORMATION WITH YOU WE FOUND IN OUR GENERAL STUDY OF RELEASE MECHANISMS

DEFINE PROBLEM

ASK: WHAT CURRENT IMPERFECTIONS ARE WE TRYING TO OVERCOME? WHAT ARE THE STRENGTHS OF THE CURRENT DESIGN.

-FSR-

mechanisms : failure to perform or exceed the [illegible] position

DESCRIBE CHARACTERISTICS OF A SOLUTION.

LEADING TO A FRAMEWORK TO GUIDE THE TASK - CHOOSING ALTERNATIVES

OUTSIDE MEETING BEGINNING TOWARD

- PRIORITIZED LISTING OF PROJECT OBJECTIVES TO SATISFY.
- DESCRIBE OBJECTIVES (features, ~~constraints~~) ACCORDING TO 5 POINTS OF VIEW: - DIFFERENT, SOME IN COMMON, SOME PERHAPS MUTUALLY EXCLUSIVE
  - CUSTOMER
  - MARKETING
  - ENGINEERING
    - DESIGN
    - PROCESSING
  - MANUFACTURING
  - LIABILITY

BEGIN
- RECONCILE OBJECTIVES AMONG POINTS OF VIEW. AGREEMENT.

THEN (later)
- DEVELOP STRATEGY(IES) TO MEET OBJECTIVES example: 3 POUND PULL DOLL - TWO SPRING MAIN RELEASE SYSTEM
- SELECT STRATEGIES AND IMPLEMENT →

NEWTON RIFLE: NTO S U F
NEWTON F S U

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LAST

EDG 7-2-01

OTHER RESOURCES - PRIOR INFORMATION

PATENTS

PATENT ANALYSIS

AFTE JOURNAL ARTICLES

MAGAZINE ARTICLES

DEFAULT TO ASS:

~~BECAUSE~~ T

- DIRECT ACTION TRIGGER
- OVER-RIDE TRIGGER

RESILIENT TRIGGER

WHY OF M700 CONNECTOR

- IMPERFECT EDGES NOT SPRUNG
- TRIGGER STOPS MIN O.T. ACCOMMODATE CLEARANCE FOR SEAR PIVOT
- REDUCE HIGH CAMMING FORCE ON BOLT OR SEAR DURING OVER-TRAVEL
- ALLOWS DIRECT MAIN USE @ TRIGGER SUPPORT SURFACE.

2ND

READ OTTESON ON PURPOSE OF M700 CONNECTOR:

130, 131

ON SAFETY: P 134

FIRST

M700 WEAKNESS:

F.S.R.

TWO EXPLANATIONS

OTHER OUTSIDE INFO: BRIEFLY not in detail, but make you aware of them.

MAIN TOPIC

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CUSTOMER POINT OF VIEW

HIGH "EASE OF USE"

- QUICK TO FIND
- EASY TO OPERATE
- EASY TO UNDERSTAND
- RELIABLE TO OPERATE

- EASY TO USE WITH 'SCOPE
- CRISP TRIGGER PULL
- MINIMUM CREEP
- HIS OWN PERCEPTION OF "WHAT IS"

MEDIUM

- QUIET OPERATION
- MINIMUM BACKLASH (feedback)
- SINGLE STAGE PULL
- EASILY KNOWN STATUS ("S" OR "F")
- PLEASING APPEARANCE
- ADJUSTABLE FOR WEIGHT OF PULL

LOW

- LOCATION OF SAFETY (CONSISTENT WITH EASE OF USE)
- HOW MECHANISM PREVENTS UNINTENDED FIRING - WHAT IT BLOCKS
- MINIMUM TRIGGER OVER-TRAVEL

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MARKETING — POINT OF VIEW

HIGH

- RESPONSIVE TO THEIR ASSESSMENT OF WRITERS' & CUSTOMERS' PERCEPTIONS OF REALITY.
- AVOID MULTIPLE FEATURE OPTIONS WHICH WOULD COMPOUND/CONFUSE SALES / INVENTORIES
- PRESERVE PRODUCTION CAPABILITY TO SATISFY M700 DEMAND
- EASY TO UNDERSTAND AND USE
- USER ABLE TO OPEN [AND CLOSE] BOLT IN A SAFE CONDITION ("3-POSITION SAFETY")
- BOLT LOCKED DOWN IN "S" CONDITION

MEDIUM

- CUSTOMER-ADJUSTABLE TRIGGER PULL FORCE ONLY DOWN TO MINIMUM SATISFACTORY LEVEL
- NOT ADJUSTABLE EXTERNALLY
- BOLT STOP RELEASE AWAY FROM "IN FRONT OF TRIGGER"
- NO SAFETY ON TANG
- LEFT-HAND VERSION (12-15% OF MARKET)

LOW

? ○ • FIELD-CONVERTIBLE FOR OPERATION WITH OR WITHOUT BOLT LOCK

NOT

- MAGAZINE-BOX DISCONNECT SYSTEM

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MANUFACTURING POINT OF VIEW

HIGH

- INTERCHANGEABILITY OF COMPONENTS AT SUB-ASSEMBLY AND FINAL ASSEMBLY.
- SATISFACTORY PERFORMANCE WITH NORMALLY-ACHIEVED TOLERANCES
- ONLY NORMAL TRAINING AND DEXTERITY REQUIRED TO PROCESS

MEDIUM

- READY-TO-ASSEMBLE SUB-ASSEMBLIES AT FINAL ASSEMBLY
- DESIGNED TO PREVENT INCORRECT ASSEMBLY OF COMPONENTS

LOW

- READILY REWORKABLE/SALVAGEABLE

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LIABILITY — POINT OF VIEW

HIGH

- AVOID PATENT INFRINGEMENT
- NOT INTERCHANGEABLE OR RETROFITTABLE TO M700
- TWO POSITION "S" & "F"
- SEALED UNIT; REQUIRING NO ORIGINAL OR FIELD LUBRICATION
- ROBUST AGAINST IMPACT - EXCEED SAAMI/ANSI RECCOMENDATIONS BY WIDE MARGIN
- USER OPERATION CONSISTENT WITH PRECEDENT AND CONVENTION.
- ROBUST AGAINST EFFECTS OF TAMPERING/ ADJUSTING
- HIGHLY INTUITIVE OPERATION

MEDIUM

- READILY DEFENSIBLE REASONS FOR DEPARTURE FROM CURRENT DESIGN

?. • CONVERTIBLE & REVERSIBLE BOLT LOCK

?. • INTERLOCK: WILL NOT FIRE IF TRIGGER IS PULLED AND HELD AS SAFETY S → F

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ENGINEERING PROCESSING POINT OF VIEW

HIGH

- SHORT RECEIVER
- MACHINES, TOOLING, PROCESSES CONSISTENT WITH EXPECTED VOLUME
- HIGH-YIELD OPERATIONS
- MAINTAIN M200 PRODUCTION CAPACITY

MEDIUM

- DESIGN TO INHIBIT/PREVENT INCORRECT ASSEMBLY OF COMPONENTS
- DESIGN TO PERMIT REWORK/SALVAGE

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ENGINEERING DESIGN POINT OF VIEW

HIGH

- SHORT DIMENSIONS PARALLEL TO ℄ BBL
- AVOID ANY REASON TO PUT FINGER WITHIN TRIGGER GUARD EXCEPT TO INTENTIONALLY FIRE
- EASY TO UNDERSTAND - HIGHLY INTUITIVE OPERATION
- REALITY VS. PERCEPTION RECONCILED THRU ACTUAL TESTING/ PERFORMANCE
- PRESERVE ADVANTAGES OF RESILIENT (CONNECTOR) FUNCTION
- DO NOT USE SEAR AS BOLT STOP OR APPLY BOLT STOP IMPACT TO ASSEMBLY
- REDUCED LOCK TIME
- ACTUATE SAFETY WITH BOLT OPEN

MEDIUM

- QUIET OPERATION
- ENHANCED CORROSION RESISTANCE
- COMPEL TRIGGER TO SUPPORT POSITION IN MOVING SAFETY F → S
- FULL TRIGGER RETRACTION UPON PARTIAL PULL
- MEANS TO PREVENT INCORRECT ASSEMBLY/ RE-ASSEMBLY OF COMPONENTS

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LOOKING FOR A WAY TO:

PRESERVE ADVANTAGES OF CONNECTOR = ACCOMMODATES / IMPERFECT ENGAGEMENT SURFACES & SLIGHTLY ROUNDED CORNERS.

DOES NOT FEEDBACK TO TRIGGER AS CONNECTOR CONTINUES TO MOVE

ACCOMMODATE DIFF'T MATERIALS WITH STRENGTH & HARDNESS WHERE NEEDED.

SAFETY WHICH ALSO BLOCKS CONNECTOR / TRIGGER & COMPELS THEIR RENTRY AS SAFETY IS APPLIED.

BIGGEST CONCERN:

IF BIGGEST LIABILITY THREAT IS

FSR TR. RINGER ROTATION THEN ANY DEVICE WHICH ASSIST CLEAVE TO ENGAGE MANIPULATED BY THUMB IS VULNERABLE TO INADVERTENT TRIGGER ACTUATION BY INDEX FINGER.

ROTATION SLIDING

MOST SPORTING GUNS MAY DIFFER BY DEGREE except crossbolt safety

⇒ STAY WITH TWO POSITION FRONT/REAR ON RIGHT REAR OF RECEIVER.

- ADD RELEASEABLE BOLT LOCK CLOSE TO SAFETY—MINIMUM LINKAGE
- ADD IT TRIGGER BLOCK. (DETER R.S.R. TRIGGER CONTACT)

POWER PATENT