

INDEX
TO
"THE FOULING SHOT"
VOLUMES 1 - 192

CURRENT THROUGH APRIL, 2008

© J. Lee Guthrie 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
2002, 2003, 2004, 2005, 2006, 2007, 2008

*ACCIDENTAL OMMISSIONS ****

-A-

- | | |
|-----------------------------------|---------|
| 1. Accuracy | |
| a. Average | #171-3 |
| b. Cast bullets | #22-2 |
| c. Comparing with velocity | #68-8 |
| d. In general | #192-16 |
| e. Kpsi/BHN ratio | #170-12 |
| f. Poor bore | #189-13 |
| g. Revolver | #121-16 |
| h. Wheel weights and slow powders | #168-21 |
| 2. Acra-eez mould release | #64-27 |
| 3. Actions | |
| a. Hoch single shot | #67-10 |
| b. Wrench | #169-20 |
| 4. Adjustment, iron sight | #117-5 |
| 5. Alloys: | |
| a. Aging | #89-4 |
| b. Antimony | #108-3 |

c. Arthur S. Green Metals	#66-7
d. Babbitt metal	#68-3, 186-13
e. Battery plates	#14-2, 19-16, 71-4
f. Brinell vs. Tensile Strength	#96-6
g. Castmatic	#112-5
h. Cleaning alloy	#59-25, 169-14
i. Copper	#85-4, 90-6
j. Densities	#147-3
k. Enrichment	#113-13, 184-20, 185-10
l. Hardness	
(1) Determining, simple method	#129-15
(2) How hard is good	#36-12, 59-16
(3) Versus chamber pressure	#188-4
m. High velocity with soft alloys	#72-13
n. Integrity	#70-13, 72-19, 92-3
o. Japanese wheelweights	#63-10
p. LBT hardness tester	#59-3
q. Metallurgy of lead bullet alloys	#192-10
r. Lyman #2	#184-20
s. Mag wheel weight caution	#64-7
t. Mercury for hardening	#68-2
u. Mid-range pistol alloy	#66-2
v. Mollohan's Mix	#52-30, 53-12, 74-20, 75-6
w. Mixtures and consistency	#30-17, 70-13, 87-4, 176-19,
x. Monotype and foundry type	#28-2, 63-2, 70-4
y. Phase diagram (lead/tin/antimony)	#19-2
z. Shot	#107-4
A. Soft, grease gun effect	#133-9
B. Solder (lead-tin)	#89-8
C. Sources	#32-11, 64-21, 83-3
D. Speeding up precipitation hardening	#62-2
E. Tables	#22-13, 24-16, 28-4
F. Taracorp Magnum Alloy	#30-16
G. Temperature	#45-6, 70-13
H. Ternary	#17-5
I. Two alloy hunting mixtures	#61-6, 78-4, 88-3
J. Uniformity	#66-14
K. Velocity	#76-4
L. Wheelweights	#15-2, 42-23, 71-3
M. Zinc	#25-2, 27-2, 92-3
6. Alox, liquid	#115-8, 145-6
7. Alloying	
a. Guide	#74-19
b. System	#121-8
8. Aluminum gas checks	See "Freechecks"
9. Aluminum moulds	#32-3, 47-3, 78-17

10. Ammunition, OLD (rejuvenating)	#142-16
11. Annealing	
a. Case necks	#83-3, 86-8, 90-10, 91-4, 148-15, 150-3, 165-12
b. Gas checks	#20-10, 103-8, 114-14, 120-11, 151-21, 155-22
c. Machine	#157-13
d. Nose cast bullets	#82-21
12. Antimony alloying & source	#168-14, 168-15
13. Apache Blue lube	See "Lube"

-B-

1. Backing system, moving	#123-9
2. Ball, Round	#44-5, 63-3, 106-7,
3. Ballistic coefficient of cast bullets	#54-2, 86-7, 95-13, 98-11, 134-8
4. Barrels:	
a. Barrels for cast bullets	#16-7, 49-2, 50-33
b. Bore condition	#20-2, 56-2
c. Bore measurements	#40-28
d. Bore soldering	#59-2
e. Break-in	#76-3, 90-13
f. Chrome molybdenum vs. stainless steel	#168-19
g. Cleaning and maintenance	#136-6, 142-14, 151-10, 152-4
h. Cast bullet throating	#61-2
i. Chambering by hand	#90-5
j. Conditioning	#189-13
k. Crowns for cast bullets	#179-16
l. Erosion	#154-13, 156-17, 157-5
m. Form factors	#12-2
n. Glass bedding	#42-5
o. In general	#10-2
p. Inside bluing	#33-17
q. Inside dimensions	#19-14
r. Lapping	#146-18, 151-17
s. Life	#154-13, 156-17, 157-4
t. Micro-Groove	#31-13, 74-15
u. Military	
(1) Stepped contour	#187-24
v. Revolver, setting up	#68-5
w. Reboring	#16-7, 41-3
x. Rechambering	#99-4
y. Re-lining	#188-3

z. Rifling, Enfield type	#65-2
A. Ruger #1, Douglas	#98-3
B. Seasoning barrels	#51-30
C. Seating depth	#86-3
D. Smoothing barrels	#79-7
E. Temperature	#88-4, 89-5
F. Throating	#107-3
G. Too smooth	#151-17
H. Twist problem	#25-2, 28-5
I. Two groove Springfield	#91-3
J. Used, fitting	#85-4
K. Weight	#91-27
5. Bases	
a. Bullet	#126-15
b. Chamfer tool	#144-3
c. scope (fitting)	#61-23
d. Squareness	#146-3
6. Battery plates	#14-2, 71-4
7. Bedding, rifles	#15-5, 16-3, 99-14
8. Berdan cases, salvaging	#78-18,83-25
9. Birdshot loads in pistols	#169-13
10. Black powder cartridge shooting	#71-21, 84-5, 106-8, 128-15
11. Black powder cartridge cleaning	#93-9
12. Blazer cases	#104-10
13. Blow-back	#111-13, 174-12
14. Bolt	
a. Handles, breaking M-788	#65-23
b. Gun, making from scratch	#81-9, 84-12
c. Size to case head	#95-3
15. Bore	
a. Cleaner	#8-3, 10-3, 60-2, 62-2, 95-9, 96-9, 98-15, 100-8, 113-9,
b. Cleaning tips	#63-25
c. Fouling	#100-9
d. Ironing	#93-8
e. Lapping	#82-21
f. Leading	#81-4
g. Rough	#33-15, 82-7
16. Box, shooting	#126-13
17. Brake, muzzle (KDF)	#89-17
18. Brass	
a. Problems with military .308	#128-11
b. Salvaging Berdan	#78-18
19. Breach seating	#1-1, 34-2, 37-23, 42-23, 83-3
20. Buckshot	#127-8
21. Bullet:	

a. Age hardening or softening	#144-3, 192-10
b. Alberts 154 gr. FN	#42-4
c. Bases	
(1) Base upset	#128-5
(2) Chamfer tool	#144-3
(3) Comparing plain base to gas check	#152-15, 166-17
(4) Dents in	#121-14
(5) Seating depth	See "Seating depth"
(5) Squaring	#98-15
(6) Wire edges	#61-24
d. Bent bullets	#59-24
e. "Blue"	#69-2
f. Boat Tail	#95-13, 97-9, 119-4
g. Bumping	#14-5, 16-2, 18-13, 19-9, 19- 15, 20-16, 32-2, 44-22, 59-24, 60-16, 70-2, 79-4, 89-3, 131-11, 132-10, 134-8, 134-10, 144-15, 146-3, 153-9, 154- 4, 172-3
h. Casting technique	#47-21
i. Chapman custom hunting moulds	#26-13
j. Comparing calibers (6mm to .30)	#50-28
k. Copper plated	#47-2
l. Counter	#108-16
m. Cryogenic treatment	#126-19
n. Deformation	#7-2
o. Eagan Bumping Stop for RCBS & Lyman Sizers	#35-13
p. Eagan MX 2-22 in .222	#48-19
q. Expansion	#19-4, 113-14, 143-10, 169-18, 181-10,
r. Fit	#167-18, 173-___, 177-12
s. Flat base, making	#161-17
t. Frosting	#100-18,
u. Gould 330 grain hollowpoint	#109-10
v. Hammer swaging	#105-19,
w. Hammerheads	#48-12
x. Hardness	#74-3, 80-3, 114-19, 136-10, 170-12, 188-4
y. Heat treating	#22-9, 29-2, 31-8, 33-3, 37-3, 37-5, 37-19, 39-11, 55-3, 62-16, 63-2, 79-4, 142-15 , 144-20, 169-14, 182-3
z. Heavy bullets in .44 mag & .45 Colt	#67-8
A. Heeled bullets	#121-3, 125-3
B. Hoch #730 .30 cal. mould	#26-11
C. Hoch #80	#37-9
D. Hollow points	#21-5, 24-9, 30-8, 67-18, 87- 12, 113-10, 169-18

E. Hunting	#26-10, 27-7, 59-18, 61-6, 182-3
F. Ideal diameter	#38-2
G. Lee 7mm - 130 gr.	#48-26
H. Length	#135-12
I. Lubrication of "as - cast"	#36-15
J. Lyman	
(1) #308403 Pope	#180-12
(2) #311291 Lyman	#40-6
(3) #311299	#182-19
(4) #323471 Lyman for 8mm Rem. Mag	#55-26
(5) #457191 in .45 Colt	#63-20
K. M-EX 2 - .243	#51-10
L. Measuring service	#180-3
M. Moly coating (see Molybdenum sulfide)	
N. NEI	
(1) "DD" (dimensional details)	#135-4,135-6
(2)	#43-15
(3) .30 Wasp-Waist	#128-12
O. Nomenclature	#76-16
P. Obturation of cast bullets	#41-10, 55-19, 150-15
Q. Orientation	#77-11
R. Oversize	#174-11
S. Patching	
(1) Paper patching	#50-39, 78-20, 105-16, 114-15, 159-15, 177-10
(2) Wire patching	#177-17
T. Plain based	#37-6, 41-4, 63-16, 65-13, 148-3
(1) .32 Win Spec plain base v. gas check 321297	#175-12
U. Puller, collet (slipping)	#142-16
V. Quench-Annealing	#53-27, 57-24, 58-9
W. RCBS 145-7 mm silhouette	#43-21
X. RCBS .30 - 165 and 180	#46-14
Y. RCBS 145-7mm	#50-38
Z. RCBS .22 (22-055-FN)	#65-7
AA. Revolver bullet design	#68-7
BB. Rounded edges	#168-3
CC. Seating depth	#17-6, 75-4
DD. Segregating cast bullets	#68-23, 136-11
EE. Self-defense cast bullets	#180-10
FF. Shrinkage voids in large bullets	#16-5
GG. Shape	#4-4
HH. Sizing	#24-16, 60-16, 63-2, 65-3, 70-15, 78-3, 89-14, 111-9, 170-20
(1) Nose first	#140-8, 161-9, 189-11
II. Small bore	#18-13, 41-15
JJ. Softnose	

(1) LBT Caster	#60-15
(2) Lead roundball method	#121-11
KK. Spitzer	#29-20
LL. Split nose	#43-4, 87-13, 113-10, 118-12,
MM. Stability	#50-8, 137-11
(1) In slow twist .44s	#175-16
NN. Sticking in mould	#180-3
OO. Taper die	#175-20
PP. Tapered lead bullets	#38-8, 56-3, 60-16
QQ. Teflon taped	#46-3
RR. Tipping	#81-3
SS. Too long for .30-06	#44-3
TT. Tweezers	#188-14
UU. Unlubed bullets	#114-7, 115-13, 116-12, 117-4,
VV. Voids in	#127-16, 163-13, 168-16
WW. Wadcutters	#180-5
XX. Wasp-waisted	#128-12, 130-9
YY. Wear, bullet	#169-19
ZZ. Weighing bullets	#42-19, 158-9
AAA. Weight	
(1) Calculating	#14-4
(2) Segregating	#132-12
BBB. Without lube, shooting	#80-8

-C-

1. Cartridge case, .30-30 w/small primer	#67-11
2. Case	
a. Annealing	#83-3, 86-8, 87-8, 90-10, 91-4, 139-5, 140-3, 148-15, 150-3, 165-12
b. Capacity	
(1) Reducing	#73-24, 113-9,
(2) Small vs. Large	#145-20
c. Cleaning	#86-6, 92-9, 93-9, 96-16, 159-15, 160-19
(1) Alloy	#169-14
d. Crimping	#96-21
e. Collet bullet pullers (slipping)	#142-16
f. Deburrer	#87-14
g. Design	#73-14
h. Fillers	#78-3, 113-9, 123-3, 126-5,
i. Head alteration	#86-11
j. Head size to bolt size	#95-3
k. Marking	#165-3

l. Military, sizing	#107-3
m. Mouth flaring, reaming, & expanding	#9-4, 15-5, 79-3
n. Neck	
(1) Cleaning	#151-3
(2) Expansion	#75-4, 111-10, 125-5
(3) Length	#79-4, 147-14
(4) Sizing	#187-22
(5) Tearing	#117-12, 117-13,
(6) Tension	#12-3, 40-29, 100-18, 125-5
(7) Thick	#117-14,
(8) Trimming	#41-21
o. Optimum .30 case capacity	#48-28
p. Preparation	#60-26
q. Salvaging Berdan	#78-18
r. Short, causing leading	#119-7
s. Shortening, cause of	#119-8, 120-8, 135-6
t. Shoulder setback	#98-15, 140-17
u. Small vs. standard	#43-2
v. Spinning	#68-24
w. Spring-back	#186-3
x. Steel pistol,	
(1) reloading	#173-3
(2) .45 auto	#174-3
y. Straight	#18-5
z. Trimming	#39-5, 140-14, 141-5
A. Tumbling	#34-13
B. Undersize sizing dies	#163-24
C. Voids, air bubble	#167-20
D. Weighing	#31-4
E. Weight variation	#74-4
F. Wet cleaning	#159-15
3. Cast bullets for handgun silhouette	#34-4
4. Cast bullets in military rifles	#34-3, 55-7, 56-9, 57-8
5. Cast Checks	#80-12
6. Casting:	
a. Basics	#50-20
b. Bottom pour	#141-16, 147-7
c. Bubbles	#73-9
d. Dipping versus dropping	#63-14, 73-9, 73-26, 120-19,
(1) Open dipping	#167-8
e. Dross, problems	#72-4
f. For iron targets	#30-2
g. Heat treating	See "Bullets"
h. Hollow points	#30-8
i. Humidity	#40-3
j. Inert gas	#163-22

k. Ladle pour	#147-7
l. Lead pots	#49-15, 55-22, 67-30
m. Match bullet reject rates	#63-13
n. Methods	#174-13
o. Oxidation barrier	#54-25, 57-29
p. Safety	#49-15, 67-30, 77-7
q. Soft Nose	#81-15
r. Sprue holes, smaller	#83-20
s. Standing wave	#167-8
t. Surface tension	#30-2
u. Techniques	#5-7, 18-7, 47-21, 70-11, 81-20, 94-20, 152-8, 154-18, 180-9
v. Temperature	#17-9, 23-9, 36-14
w. Tips	#144-15
x. Weight variation	#80-3
7. Cerrosafe (chamber casts)	#40-28, 70-2, 106-13,
8. Chamber	
a. Adapters	#188-9
b. Damage, .38 in .357	#99-3
c. Nomenclature	#36-4, 76-15
d. Measurements	#40-28,
(1) Chamber slug	#145-5
e. Out of square	#77-3
f. Pressure	#41-5, 131-10, 188-4
g. Revolver, measuring	#40-2
h. Ringing	#4-2, 27-2, 37-22, 66-17, 69-8, 73-3, 74-13, 77-10, 78-12, 79-13, 80-3, 83-24, 84-3, 85-3, 91-16, 140-13, 142-15, 144-7, 146-20, 185-11
i. Throat size	#25-10, 97-18, 101-4, 165-4
9. Chambering by hand	#90-5
10. Chambering tips	#26-8
11. Checks, disc	#168-8
12. Cleaner, bore	#8-3, 10-3, 20-6, 60-2, 62-10, 100-8, 113-9, 140-12, 150-25, 161-25,
13. Cleaning	
a. Bore	#22-14, 63-25, 90-15, 95-9, 130-5, 151-10, 152-4, 185-18
b. Cases	#86-6, 92-9, 160-19
c. Lead in quantity	#59-25
d. Rods	#124-3, 127-11, 145-15, 147-9
e. Moulds	#73-22, 153-3, 170-3
14. Coaxsizer	#60-16, 61-10, 82-5, 161-12
15. Collet Die, Lee	#174-20

16. Competition, ideal bore size for	#155-10
17. Composite CB's on chucks	#66-20
18. Computer programs for shooting	#67-11, 75-13
19. Contender, T/C	#39-9, 41-13, 44-2, 46-8, 51-26, 54-15, 55-2, 56-14, 57-3, 73-4, 81-3
20. Conversions (T/C) (.45/70, .444, & .40/65)	#46-8
21. Conversion cylinder (Taylor's Drop-in)	#170-19
22. Cookie cutter, lube	#169-22
23. Copper	
a. Alloys	#85-4, 90-6
b. Foil wrapped bullets	#106-12
c. Fouling and bore soldering	#59-2, 95-9
d. Plated bullets	#47-2
24. Corbin bore cleaner	#19-8
25. Correlating cast & jacketed loads	#64-2
26. Cowboy guns & loads	#143-18, 144-22
27. Cream-of-Wheat (COW) loads	#122-8, 125-7, 126-5, 132-5
28. Crimper, gas check	#76-3
29. Crown, barrel	#179-16
30. Cryogenic barrel treatment	#126-19
31. 6mm "CBC" cases	#49-7
32. Cutting, gas	#7-1

-D-

1. Decapper, home made	#161-13
2. Definitions	
a. Chamber nomenclature	#36-4
b. Projectile nomenclature	#37-11
3. Defect, effect of visual defect	#112-12
4. Deformation, bullet	#7-2
5. Degreasing cosmolene military stocks	#144-3
6. Dents in bullet bases	#121-14
7. Dies	
a. Lee, collet type	#121-4, 174-20, 179-3
b. Cleaning	#174-5
c. Re-loading	#59-23, 67-15
(1) enlarging for cast bullets	#177-8
d. Size, tapering	#140-11
e. Taper	#93-3, 181-12
8. Dippers vs. measures	#75-3
9. Disc checks	#168-8

10. Drag from lube grooves	#169-24
11. Drawing heat treated bullets	#66-2
12. Dripping lead pot, cure	#167-3
13. Dropout, difficult bullet	#130-11
14. Dross, excessive	#69-2, 72-4
15. Dry lubricant	#43-8
16. Duplex loads	
a. Blackpowder in .45-70	#37-4
b. Smokeless	#123-7

-E-

1. E-A-R muff	#57-13
2. e-mail	#143-12
3. Electrochemical polishing	#127-17
4. Ed's Red (bore cleaner)	#140-12, 161-25
5. Etching	#129-8
6. Equipment:	
a. Acra-eez mould release	#64-27
b. Auto-Disk linkage repair	#188-10
c. Ballard reloading tools	#136-16
d. Bennet base trimmer	#33-31
e. Brownell's Lead-out	#81-25
f. Bullet base chamfer tool	#144-3
g. Case expanding die, Lee Universal	#175-19
h. Chamber reamer rental	#145-5
i. Crimper, gas check	#76-3
j. Deburrer, case	#87-14
k. Decapper, boxer and Berdan	#144-13, 161-13
l. Dies	
(1) Bumping, bullet	#131-11, 132-10
(2) Homemade full length sizing dies	#166-21
(3) Lee collet, improving	#179-3
(4) Loading	#59-23, 67-15
(5) Lubrisizer modification	#145-6
m. Dipper casting	
(1) Open dipper casting	#167-8
n. Disc checks	#168-8
o. Eagan .30-T tapered sizing die	#45-14
p. Eagan gas check seater	#31-15
q. Electronic bore cleaner, homemade	#95-9, 96-9,
r. Freechec	#44-7, 58-5, 59-12, 60-13, 67-24, 155-13

s. Gas check spreader (expander)	#94-21, 159-16, 177-11
t. Gauge, OAL	#176-14
u. Getting started (basics)	#33-19
v. Guides, rod cleaning	#27-13
w. Hanned Precision Coaxsizer	#60-16, 61-10, 78-9
x. Hardness tester, lead	#123-11, 155-21, 175-14
y. Heat treating bullet holder	#109-4
z. Homemade loading tools	#67-15
A. Huntington Compact Press	#42-13
B. JRW base wad extrusion pump	#84-20
C. LBT BHN tester	#64-9
D. LBT bullet moulds	#72-7
E. LBT Softnose Caster	#60-15, 67-18
F. Lead hardness tester	#150-11
G. Lee	
(1) Auto Index Turret	#47-19
(2) Auto-Prime (safety)	#103-10
(3) Case Expander	#180-3
(4) Collet die as neck sizer	#89-14
(5) Hardness tester	#171-8
(6) Load Master	#102-8
(7) Perfect powder measure	#102-8
(8) Powder dippers	#73-25, 75-3
(9) Zip Trim	#167-15
H. Lube heater	#91-15, 100-17, 154-17
I. Lubrisizer torque wrench	#150-16
J. Lyman	
(1) Casting thermometer	#46-13
(2) Gas check seater	#49-29
(3) Electric powder measure	#92-16, 114-19,
(4) Lubrisizer	#7-3, 98-10, 155-19
(a) leakage	#179-3
(5) M-die	#91-14
K. Magma's Master Caster	#167-15
L. McLemore - Pope Universal moulds	#48-27
M. Mould modification hand tools	#60-20
N. NAPA dgf 123 (dry graphite film)	#174-17
O. NAPA B'laster PB (penetrating oil)	#174-17
P. Neck size die, Lee collet	#73-9
Q. New (1986) RCBS sprue plates	#63-24
R. Nexpander	#63-9
S. P-Chec die (Hanned Precision)	#71-8
T. Pedestal, shooting	#78-26
U. Poly-wad cutter	#112-7
V. Pot	
(1) Cover	#176-3

(2) Ferguson ladle pour	#176-8
(3) Homemade	#112-8, 188-11
W. Potter lead tester	#111-3, 113-6,
X. Powder measure, homemade	#116-4
Y. Primer seating measurement	#185-12
Z. Reamer	
AA. (1) adjustable depth stop	#161-8
(2) sprue plate	#175-19
(3) tapered	#175-20
BB. Reloading	
(1) bench	#159-13
(2) Die, enlarging for cast bullets	#177-8
CC. Saeco lubrisizer	#105-15, 120-10,
DD. Seaters, adjustable breech	#73-26
EE. Single-Flute Cutter for making bullet moulds	#166-16
FF. Sizing die expansion	#99-11
GG. Soft gas checks	#47-20, 48-20
HH. Stop, bumping (for Lyman 450)	#19-9
II. Star lubrisizer repairs	#156-18
JJ. Taper die	#171-10, 175-20
KK. Top punch, floating	#177-3
LL. Tumblers, brass damage	#99-4
MM. Turret press	#161-8
NN. Wad cutter	#114-8
OO. Williams Gun Sight Co.	#174-19
PP. Wind flags	#164-17
QQ. Wrench, guardscrew torque	#69-19
7. Erosion, throat	#73-21
8. Expander plug	
a. For revolver	#42-2
b. Long Necks	#120-9
c. Problems	#87-3
d. Proper size	#69-4
e. Two step expanding	#109-5, 119-13
f. Wobble	#55-26
9. Expansion, case neck	#75-4
10. Expansion, cast bullet	#19-4, 113-14, 143-10, 181-10,

-F-

1. Feeding problems in '03 Springfield	#102-3
2. Fillers, case	#6-2, 9-4, 9-5, 16-6, 20-6,

	48-4, 61-2, 68-13, 73-3, 78-3, 78-22, 85-3, 95-20, 106-9, 122-8, 123-3, 125-7, 126-5, 126-15, 132-5, 141-7
3. Firearms system (multipurpose guns)	#54-11
4. Fire lapping	#166-21, 168-3
5. Flaps, wind	#128-8
6. Flaring, case mouth	#79-3
7. Fluxing	#25-9, 138-18, 147-8
8. Forcing cone angle	#53-2
9. Form factors, bullets	#12-2
10. Formulas (math for shooters)	#73-22
11. Foil, copper wrapped bullets	#106-12
12. Fouling	
a. Excessive bore	#65-2
b. Shots	#91-3
13. Foundry type	#120-19
14. Freechec	#44-7, 58-5, 59-12, 67-24, 155-13 157-7
15. Frosting on bullets	#100-18

-G-

1. Gas checks:	
a. Annealing	#20-10, 103-8, 114-14, 120-11, 151-21, 155-22, 160-18
b. Cast Checks	#80-12
c. Crimper	#76-3
d. Cup vs. crimp	#40-17
e. Design, shooting without	#95-3, 148-10
f. Disk Checks	#168-8
f. Expander/Spreader	#94-21, 159-16, 177-11
g. Fit	#41-26
h. Force seating	#22-15
i. Freechec	#44-7, 58-5, 59-12, 60-13, 67-24
j. "Homebrew" gas checks	#63-22
k. Importance of	#13-9
l. In general	#138-10, 140-6
m. Inverted	#158-8, 160-17
n. "Lost"	#171-4
o. Oversize shank	#154-4
p. Polyethylene wads	#68-13
q. Scale, removing	#120-11
r. Seating separately	#49-11

s. Shank	
(1) Reaming out	#178-18
(2) Sizing	#188-4
t. Soft GC	#47-20, 48-20
u. Springback	#140-10
v. Squaring up	#91-21, 103-4, 166-19, 183-12
w. Swaging	#107-9
x. Tight	#82-21
y. Too large for bullet shank	#38-4
z. Uniformity	#45-26
A. .41 mag	#174-3
2. Gas cutting	#7-1
3. "Guard" or "Gallery" loads in .30-06	#192-5
4. GI Bore cleaner	#60-2
5. Graphite	
a. Spray	#174-17
b. Wads	#108-5
6. Grease wads	#108-5, 111-15,
7. Greenhill's Formula	#48-5, 52-2, 53-38, 84-16, 98-7, 99-7, 121-5, 125-14, 157-5, 164-7
8. Groove	
a. Design, lube	#150-3
b. Diameter, measuring	#101-16, 104-12, 105-17, 106-10,
c. Drag from	#169-24
9. Group size, wind effects	#42-16
10. Guides	
a. Mould	#108-15
b. Rod, cleaning	#27-13

-H-

1. Hammerheads	#48-12
2. Handgun silhouette	#63-17, 66-22, 110-21, 173-6
3. Handloading, practical	#172-13
4. Hardening, age	#84-23
5. Hardening, mercury	#68-2
6. Hardening, precipitation	#62-2
7. Hardness	
a. Bullet	#74-3, 80-3, 114-19, 136-10, 192-10,
b. Chamber pressure and BHN	#116-11, 131-10
c. Causes or "How to"	#192-10
d. Comparing bullet vs. ingot hardness	#175-15
e. Interpolating pressure for BHN	#102-4
f. Method for determining	#129-15

- g. Testing #23-6, 37-32, 50-17, 57-2, 59-3, 118-3, 126-9, 155-21
- 8. Heat treating (See "Bullets")
 - a. Calibration of home oven #192-10
 - b. Cracked bullets #39-11
 - c. Quench - annealing #175-13
 - d. Drawing bullets #53-27, 57-24, 58-9, 79-4, 92-11, 101-3, 133-16, 144-20
 - e. Lead vapors in #66-2, 132-15, 152-3
 - f. Leading in H & K P7 #92-5
 - g. Re-heat treating after coax sizing #71-23
- 9. High velocity cast bullets #82-5
- 10. Hoch moulds #52-26, 56-32, 56-33, 62-16, 67-18, 72-13, 115-5, 116-6, See "Moulds" and "Bullets"
- 11. Hoch single shot action kit #73-10, 77-6
- 12. Hollow point bullets #21-5, 24-9, 30-8, 67-18, 71-16, 82-13, 87-12, 108-10, 113-10, 128-9
- 13. Humidity and casting #40-3
- 14. Hunting #15-6, 18-6, 56-32, 56-33, 57-5, 57-24, 58-7, 59-18, 59-26, 61-6, 61-21, 64-8, 64-22, 67-18, 67-29, 68-17, 71-16, 72-20, 73-17, 73-18, 74-22, 75-8, 80-14, 81-14, 82-10, 84-18, 85-12, 87-12, 87-13, 87-16, 88-8, 89-6, 90-17, 92-14, 92-16, 94-4, 94-19, 95-20, 103-15, 103-22, 104-11, 105-10, 107-11, 108-14, 121-11, 176-14, 177-4, 124-6, 141-6, 145-9, 149-14, 151-17, 156-23, 161-7, 163-8, 163-12, 165-18, 169-12, 169-13, 169-16, 171-9, 176-9, 176-13, 177-11, 177-13, 178-18, 182-15, 186-19
- 15. Hydraulic support (lube pockets) #134-1

-I-

- 1. Ignition

a. Primers, in general	#3-8, 4-2, 7-1
b. Problems	#66-11
2. Inert gas casting	#163-22
3. IPSC, .45ACP	#48-2
4. Ingot moulds	#126-5
5. Internet gun related groups	#129-17
6. IPSC – moulds for competition	#155-17
7. Iron sights	#169-17

-J-

1. JRW base wad extrusion pump	#84-20
2. Jacketed bullets	#21-15

-K-

1. KDF Muzzle Brake	#89-17
2. Keyhole (Tipping Bullets)	#81-3
3. Kitty Litter, oxidation barrier	#8-4, 54-25, 78-28, 105-5, 107-7,
4. Krag, bolt cracking	#177-12

-L-

1. Ladle	#173-10
a. Left hand	#155-21
2. Lapping	
a. Barrels (pressure/fire lapping)	#104-7, 110-15, 110-19, 117-3, 124-5, 125-3, 146-18, 151-17, 154-17
b. Moulds	#38-3, 146-18, 154-15
3. LBT hardness tester	#59-3
4. LBT moulds	#72-7
5. Lead	
a. Alloying	#157-19, 176-19, 191-15
b. Blowback	#174-12
c. Fumes	#108-3, 109-3

d. Hardness tester	#155-21
e. Melting scrap	#101-14
f. Metallurgy of cast bullet alloys	#192-10
g. Poisoning	#119-3, 148-3, 152-14
h. Pots	#14-6, 49-15, 55-22, 67-30, 79-11, 94-20, 102-14, 122-3, #186-13
(1) digital control	#135-7
6. Leade	#8-2, 24-2, 59-2, 71-3, 81-4, 85-3, 94-15, 103-16, 110- 16, 119-7, 129-8, 156-21, 183-3, #192-7
7. Leading	#61-13
a. Causes	#42-22
8. Length, mould	#36-10, 37-13, 42-21, 65-20
9. Lever action Rossi, NEI 170.358	#73-23, 84-3
10. Lever action technical tips	#74-4
11. Lever action loads	#5-1, 28-6, 69-10, 82-17
12. Lever action strength	#54-4, 61-25, 130-14
13. Load development	#148-16
14. Loading at the range	#64-2, 69-10
15. Loading tray for Mauser bolt actions	
16. Loads, correlating cast & jacketed loads	
17. Lube:	
a. Alox	#10-4, 18-4, 115-8, 147-16, 161-11
b. Apache Blue	#57-10, 67-26
c. Bullet Master	#29-6
d. Case, home-made	#150-21
e. Chemical basis for function	#122-12
f. Cold weather	#37-8, 130-8
g. Comparisons	#69-17
h. Cookie cutter modified	#169-22
h. Darr lube	#70-3
i. Diffusible components	#151-16
j. Dry lube	#43-8, 44-11, 120-4
k. Experimenting	#37-24, 65-30
l. Flying	#93-3
m. Graphite lube	#49-2, 52-10, 96-21,
n. Groove	
(1) design	#150-3
(2) drag from lube groove	#169-24
o. Heater, inexpensive	#91-15, 120-18,
p. Heating tests	#165-8
q. Homemade	#99-12
r. In general	#5-3, 88-10, 130-12
s. LBT Blue	#54-14, 78-28
t. Lee case lube	#59-3
u. Lithium grease	#18-9

v. M & N	#21-14
(1) homemade	#186-6
w. Metal lube, case neck	#68-24
x. Meyer's Lube	#91-20
y. Mica, NOT talcum	#173-16
z. Migration (Contamination)	#170-10, 174-15
A. Mold, making for lube	#161-14
B. Nose lubing	#90-15
C. Physical properties	#156-24
D. Pockets	#134-11
E. Pressure in the bore	#130-7, 136-8, 137-5
F. Pump, base wad extrusion lube	#152-3
G. Purging (lube purging fliers)	#120-5, 129-12
H. Radix Magnum dry film	#61-14
I. Rooster Red	#64-28, 78-28
J. SPG	#105-16,
K. Smokeless	#90-3
L. Soap in bullet lube	#168-17
M. Sugar in beeswax	#55-2
N. Tallow	#98-6, 100-9,
O. Texaco Taurak 250	#77-5, 87-8, 163-16, 170-3
P. Tumble	#153-17, 189-18
Q. Water soluble	#114-16
R. Without lube, shooting	#80-8, 82-14, 83-23, 84-21, 114-7, 161-13
18. Lubricate, self	#118-3
19. Lubrication	#121-12
20. Lubrisizer	
a. Cleaning	#66-19
b. Concentric	#143-17, 148-11
c. Heater	#154-17
d. Lyman 45 reconditioning	#155-19
(1) Leaking	#179-3
e. Nose punch, floating	#119-4
f. Star, repairing	#156-18
21. Lucky shots (statistics)	#192-19
22. Lyman #2 alloy	#184-20
23. Lyman moulds	See "Moulds" and "Bullets"
24. Lyman Bullet Seating Die, convert to taper	#127-15

-M-

1. M-Die modification	#119-13
2. Mag-Na-Port	#82-3, 83-18, 84-4, 87-10,

	120-3,
3. Match Wheelgun load preparation	#81-11
4. Math for shooters	#73-22
5. Mauser M-96, Swedish -- strength	#74-3
6. Measuring	
a. slug	#184-11, 187-5
b. targets (string measure)	#192-3
7. Melting pot shield	#152-3
8. Mercury, hardening alloy	#68-2
9. Micro - groove barrels	#36-2, 43-17, 49-27, 74-15, 191-3
10. Military Rifles	
a. Loading for military match	#189-9
11. Minute of angle	#120-3, 121-3
12. Moisture in casting equipment	#49-15
13. Molybdenum disulfide	#130-6, 139-9, 140-5, 144-17, 180-3,
14. Monotype, diluting	#63-2, 120-19,
15. "Moon" clips	#92-15
16. Moulds:	
a. Acra-eez mould release	#64-27
b. Altering	#93-15
c. Aluminum	#32-3, 47-3, 78-17
d. Borrego	#29-6
e. Burrs, cavity (removing)	#133-18
f. CSS .270	#66-29
g. Cleaning	#73-22, 96-13, 118-14, 153-3, 170-3
h. Core pin lapping	#109-15
i. Cutting	#161-16
j. Darr	#14-9, 14-11, 15-8
k. David Mos moulds	#144-27
l. Dimension problems	#33-5, 60-20
m. Eagan	#93-7, 167-10
n. Enlarging by acid etching	#116-14
o. Gang	#84-13
p. General maintenance	#13-4, 113-14, 137-8, 139-17
q. Gould Hollow Point	#30-5, 167-5, 186-19
r. Guide	#108-15
s. Handles	
(1) Lyman	#187-3
(2) Repair	#91-20, 96-15, 111-16, 113-11, 176-3, 191-3
t. Heat transfer	#37-16
u. Heating before casting	#35-9
v. Hoch	
(1) .45-70 #459355	#51-33

(2) In general	#9-3, 11-4, 28-13, 29-18, 31-14, 67-26, 68-3, 70-3, 174-9
w. Home made	#181-9
x. LBT	#81-6
y. Lapping	#38-3, 70-2, 98-12, 109-15, 146- 18, 154-15
z. Lathe boring	#165-13
A. Lee	
(1) Block pin repair	#142-3
(2) Improving	#133-17
(3) Six cavity	#79-9, 185-17
(4) Tune up	#50-35
(5) 452-255-RF	#177-15
B. Lyman – Ideal	
(1) 287346	#177-16
(2) 299153	#175-11
(3) 311284	#145-5, 175-5, 175-18
(4) 311291	#175-5, 175-18, 177-7
(5) 311299	#169-16
(6) 311334	#167-14
(7) 311335	#76-11
(8) 311365	#167-14
(9) 311413	#190-16
(10) 31357	#187-7
(11) 313226	#187-7
(12) 313445	#187-7
(13) 321297	#175-12
(14) 358156	#173-19
(15) 358318	#160-19
(16) 358627	#51-17
(17) 287641	#94-12
(18) 412263	#187-5
(19) 429650	#150-13
(20) 452423	#139-12
(21) 457122 HP (Gould)	#30-__, 100-3, 103-7, 105-6, 106-13, 109-10, 167-5
(22) 457124	#173-__, 174-3
(23) 515141	#176-11
(24) 515142	#176-11, 187-5
(25) 518145	#176-11
(26) Modifying to nose pour	#72-15
(27) Overview of .30s	#136-13
C. Metal for mould manufacture	#59-16
D. McLemore - Pope Universal moulds	#48-27
E. Mould length list	#61-13
F. Mould Prep/NEI	#24-5, 25-5, 132-8

G. NEI	
(1) 224-71 GC	#44-24
(2) 301-182-PP	#177-7
(3) 308-142 AB	#44-20, 45-29, 62-23
(4) 308-168	#134-12
(5) 308-195 Spitzer	#45-16
(6) 308-220-GC	#52
(7) 311-155-GC	#65-9
(8) 358-170 for Rossi lever action	#42-22
(9) 358-300-GC	#177-4
(10) 458-430 GC	#52-33
(11) In general	#21-8, 132-9
H. Nosepour	#44-18
I. Old West	
(1) .45 Colt	#29-5, 69-8
(2) 7mm and .312	#40-15, 69-8
(3) In general	#32-8, 59-11, 69-8
J. P. & C. moulds	#49-13
K. Pin	
(1) Adjustment	#176-3
(2) Repair	#111-10
L. Proper care of moulds	#55-25, 64-20
M. Rapine	#75-9, 75-11
N. RCBS	
(1) In general	#59-14, 70-3
(2) .22 (22-055-FN)	#65-7
(3) 270-130-FN	#177-4
(4) 429-240-SIL	#177-3
O. Repairs	#77-13, 145-13, 152-19, 156-20
P. Rust	#19-13, 32-11, 57-4
Q. Single flute cutter, making moulds with	#166-16
R. Squaring	#44-9, 60-20
S. Smoking	#9-3, 14-2
T. SSK 431.305	#65-14
U. Sticking (bullet sticking in)	#180-3
V. Storing	#42-5
W. Tapered	#56-3
X. Temperature, gauging	#144-27
Y. Throat, matching to	#94-3
Z. Tools to modify	#60-20
AA. Tune up	
(1) In general	#12-5, 147-12
(2) Lee moulds	#50-35
BB. Vice for making bullet moulds	#163-9
CC. Welsh moulds	#32-7, 40-14
17. Mouth, case reaming	#15-5

18. Mouth, case expanding	#9-4
19. Moving backing system	#123-9
20. Multipurpose guns and loads	#54-11
21. Muzzle	
a. Brake, KDF	#89-17
b. Damage	#148-4
c. Pressure	#131-7

-N-

1. Neck	
a. Clearance between cartridge and neck	#173-13
b. Expansion , case neck	#12-3, 75-4, 91-14, 111-10,
c. Ring, lead around neck	#152-9, 174-12
d. Sizing	#45-30, 84-23, 137-5
e. Tension, case	#40-29, 88-4, 100-18, 115-9, 152-19
2. NEI moulds	See "Moulds" and "Bullets"
3. Nexpander	#63-9
4. Nitrocellulose, industrial	#86-7
5. Nose	
a. bumping	#172-3
b. oversize	#120-14
c. undersize	#154-4
6. Nosepour moulds	#44-18, 82-21
7. Nosepour, modifying Lyman to	#72-15
8. Nose punch, floating	#119-4

-O-

1. Obturation of bullets	#41-10, 55-19, 150-15
2. Oil, penetrating (B'laster PB)	#174-17
3. Old West moulds	See "Moulds" and "Bullets"
4. Optical assistance	#114-10
5. Orientation, bullet	#8-4, 77-11
6. Orientation, powder	#17-4
7. Oxidation barrier (kitty litter)	#54-25, 57-29, 78-28

-P-

1. P-Chec die (Hanned Precision)	#71-8
2. Patching	
a. Aluminum foil	#90-18
b. Copper foil	#106-12
c. Paper	#50-39, 78-20, 81-14, 86-12, 86-16, 90-18, 91-17, 93-6, 94-17, 105-16, 109-6, 110-18, 113-18, 114-15, 126-11, 137-6, 159-15, 191-18
d. Teflon tape	#69-13
3. Penetration	
a. Cast vs. jacketed	#99-13
b. Tests, penetration & expansion	#143-10, 150-16
4. Phase diagram (lead alloy)	#19-2
5. Pistols:	
a. Accuracy Primer	#121-16
b. Barrels, setting up	#68-5
c. Bullet design	#68-7
d. Calibers	
(1) .22 K Hornet	#45-11
(2) .222 Rem. in T/C	#57-3
(3) .25-.35 Improved in T/C	#40-10
(4) .250 Savage in XP-100	#106-6,
(5) 6mm BR	#150-23
(6) 7mm BR in Remington XP-100	#58-2, 65-17
(7) 7.62x39	#77-3
(8) .30 Carbine in Ruger	#93-6
(9) .30 Herrett	#38-3, 51-26, 56-14
(10) .30 Mauser	#146-7
(11) 7.62mm Russian Nagant	#149-19, 179-10
(12) .30-30 Contender	#54-15, 55-3, 72-3
(13) .308 x 1.5	#58-2, 77-3
(14) .308 silhouette	#66-22, 77-3
(15) .32 ACP	#39-23, 51-12, 186-7, 188-3
(16) .32 LC	#153-14
(17) .32 S&W	#54-26, 61-24, 108-9,
(18) .32 S&W Long (.32 Colt New Police)	#54-26, 141-15, 187-7
(19) .32 H&R Magnum	#41-6, 94-19, 98-12, 177-9
(20) .32-20 Schuetzen	#97-3,
(21) 8mm Lebel	#79-5
(22) 9x18 Makarov	#118-8
(23) 9mm	#66-26, 79-17, 142-9
(24) .38 Special	#142-12, 145-17, 147-11, 180-5, 181-7, 182-7
(25) .38 Super	#158-11

- | | |
|-------------------------------------|---|
| (26) .357 Mag | #99-3 |
| (27) .41 Mag | #72-20, 135-13, 139-16 |
| (28) .44 cal. | #34-9, 39-3, 40-9, 44-2, 47-32, 52-2, 55-27, 56-2, 56-34, 64-2, 65-14, 67-8, 190-17 |
| (a) Light loads | #189-17 |
| (29) .44 mag. | #44-2, 52-2, 69-4, 83-17, 101-9, 150-13, 169-13, 190-17 |
| (30) .44/45 | #125-8 |
| (31) .45 ACP | #83-19, 91-9, 127-7, 143-13, 150-6, 151-6, 161-10 |
| (32) .45 Auto Rim | #172-19, 191-12 |
| (33) .45 Colt | #63-20, 64-24, 67-8, 75-15, 78-16, 92-17, 96-4, 110-8, 111-14, 113-4, 150-22, 161-22, 166-22, 177-13, 177-14, 190-17, |
| (34) .454 Casull | #62-5, 65-5, 77-3, 78-13 |
| (35) .455 Webley | #104-4, 131-9, 132-5, 136-12 |
| (36) .480 Ruger | #156-14 |
| (37) .50 caliber handgun | #45-8 |
| e. Large bore handgun calibers | #59-7 |
| f. Plain base, hot loads | #98-16 |
| g. Schuetzenfest pistol | #98-3 |
| h. Size of expander plug | #42-2 |
| i. Undercover pistols with cast | #55-9 |
| j. XP-100 | #94-13 |
| 6. Plated bullets | #47-2 |
| 7. Plug, expander - proper size | #69-4 |
| 8. Poisoning, lead | #119-3 |
| 9. Polishing, electrochemical | #127-17 |
| 10. Poly wad (P-Chec die) (PVC wad) | #71-8, 74-23, 76-13, 86-12, 189-17 |
| 11. Pot, lead | |
| a. Bottom pour | #141-16, 161-11 |
| b. Charcoal on top | #185-10 |
| c. Dripping, cure | #167-3 |
| d. Dross | #77-8 |
| e. Homemade | #112-8, 114-11, |
| f. SAFETY | #49-15, 67-30, 77-7, 79-11, 85-14, 102-14, 143-3, 168-4 |
| g. Temperature | #36-14, 122-3, |
| h. Tips | #106-15, |
| 12. Powder | |
| a. Dipping vs. measuring | #75-3 |
| b. Old | #181-17 |
| c. Positioning | #145-22, 173-13 |
| 13. Powders: | |

- a. Accurate Arms #49-3, 71-20, 75-15, 106-3,
130-18, 161-20, 174-18, 175-3,
#127-12
- b. Alliant
- c. Ball
 - (1) For cast bullets #141-10
 - (2) Fouling #9-2
 - (3) Reduced loads #35-29
 - (4) Ringing, chamber See "Chamber ringing"
- d. Bridging #109-15
- e. Bullseye #182-3
- f. Cryogenic treatment #126-19
- g. Density #64-6
- h. Flake, measuring #113-3
- i. For the beginner #39-12
- j. For cast bullets #95-4
- k. Non-canister #74-7
- l. Pistol powders #181-3
- m. Powder choice #31-2
- n. Orientation #17-4, 110-4
- o. Slow burning powders #15- 4, 78-3, 57-26, 61-2, 86-3
- p. Surplus #74-5, 141-11
 - (1) #107 #181-17
 - (2) 2200 #150-25, 155-22
- q. Thunderbird #66-7
- r. Trail Boss #191-19
- s. H-4831 in .45/70 #62-24
- t. H335 #33-13, 129-5
- u. MP-5744 #37-22, 45-18
- v. RL-7 #33-5, 78-22, 148-4
- w. RL-12 #67-24
- x. SR 4759 #37-21, 109-15, 112-10,
- y. 296 #39-22, 44-23, 47-23, 61-2
- z. 700X #181-3
- A. 800X #38-21
- B. 2400 in rifles #29-31, 113-7, 115-12, 117-14,
119-11
- 14. Practical hand loading #172-13
- 15. Pressure
 - a. Chamber #41-5, 131-10, 136-10
 - b. Excursion phenomenon #4-2
 - c. In general #12-4
 - d. Interpolating for correct BHN #102-4
 - e. Lapping barrels #104-7
 - f. Lubricant, pressure in the bore #130-7, 136-8, 137-5
 - g. Muzzle #131-7
 - h. Pistols #99-3

i. Signs in .44 magnum	#64-2, 101-9
16. Primers	
a. Decapping tools	#144-13
b. Hard to seat	#128-17
c. In general	#3-8, 4-2, 7-1, 133-8
d. Pistol in rifle cases	#68-4, 71-3, 113-16,
e. Pierced	#70-3
f. Pocket tightening	#169-3
g. Pocket uniforming	#186-16
h. Protrusion	#151-3
i. Switching	#133-7
j. Tests	#100-12
17. Production	
a. Class tips	#187-11
b. Rifles	#40-4, 149-11
18. Punch	
a. Top	#7-3
(1) Floating	#177-3
b. Wad	#87-9
19. Purging (lube purging fliers)	#129-12
20. Pump, base wad extrusion lube	#152-3
21. Pyrodex in .45-70	#103-19, 113-18,

-Q-

1. Quench-annealing	#53-27, 57-24, 58-9, 101-3, 109-4
2. Quiet loads	See "Sub-sonic Loads"

-R-

1. Range, loading at	#54- , 61-25
2. RCBS moulds	See "Moulds" and "Bullets"
3. Reamer	
a. Adjustable depth stop	# 161-8
b. Neck	#41-21
c. Rentals	#145-5
4. Reaming, case mouth	#15-5
5. Reboring	#41-3
6. Recoil calculations	#142-7
7. Reduced loads	#9-2, 140-14

8. Registering bullets and cases	#128-16
9. Re-lining, barrel	#188-3
10. Re-throating	#82-4, 188-15, 191-3
11. Revolvers	See "Pistols"
12. Revolvers, measuring chambers	#40-2, 96-4,
13. Revolvers, barrel throat	#71-14, 96-4,
a. Long throats	#186-17
14. Rifle:	
a. Accurizing (in general)	#192-16
b. Arisaka	#110-20, 144-3
c. Automatics, cast bullets in	#97-11
d. Bedding	#15-5, 16-3
e. Calibers	
(1) .218 Bee	#95-3, 174-20
(2) .22 CB	#68-13, 84-9, 84-21
(3) .22 Hornet	#51-12, 54-29, 91-16, 109-7, 187-18, 192-13
(4) .222	#48-3, 48-19, 67-12, 78-27, 91-16
(5) .222 x 1.5	#94-9
(6) .223	#__?__, 85-10
(7) .243 Rockchucker	#59-22, 69-15
(8) .244 (6mm)	#12-7, 20-9
(9) 6mm BR	#102-3
(10) .243	#31-13, 46-2, 47-13, 49-9, 62-15, 72-3, 86-9, 158-10
(11) .25s	#92-12, 105-13,
(12) .25 Short Hornet	#87-9
(13) .25-20	#60-4, 78-21, 80-4, 80-6, 89-3, 106-11, 108-8, 111-6, 113-15, 114-3, 174-20
(14) .25-35	#56-12, 78-21
(15) .256 Winchester Magnum	#167-10
(16) .257 Roberts	#55-28, 78-21
(17) .25-06	#67-25
(18) 6.5 x 39mm	#145-16
(19) 6.5 Swedish Mauser	#66-19, 71-19, 105-15, 113-11, 114-5, 115-15, 122-8, 147-12, 156-5, 185-3
(20) 6.8 SPC (.270 Short)	#188-14
(21) .270	#64-3, 177-4,
(22) 7mm BR	#37-7, 77-21, 115-10,
(23) 7mm-.222	#89-15
(24) 7-TCU	#64-23, 68-17
(25) 7x30 Waters	#66-2
(26) 7mm-08	#44-26, 73-15

- (27) 7x57 Mauser #42-2, 72-5,
(a) 1902 Rem 7mm Rolling Block #191-8
- (28) 7.5x55 #82-3, 154-11, 163-3, 165-11,
167-12, 176-6, 179-6, 179-12,
183-9
- (29) .280 Win; 7mm Express; 7mm-06 #177-15, 189-17
- (30) .284 Winchester #115-11,
- (31) .30 Carbine #103-20
- (32) .30/.357 #56-12, 60-7
- (33) .30 Gray #115-5,
- (34) .30 Herrett #57-18, 67-3
- (35) .300 Savage #42-26, 50-37, 190-3, 192-12
- (36) .303 Savage #73-25
- (37) .30 Johnson #13-2, 43-2, 173-10
- (38) .30-30 (7.62 x 46R) #20-4, 29-3, 33-7, 46-5, 46-___,
28, 60-2, 66-9, 109-4, 152-13,
176-9, 181-13, 184-12, 187-3,
188-9
- (39) .30-30 Wesson #146-22
- (40) .30 American #72-11
- (41) .30 BR #51-32
- (42) .308 BR #21-13
- (43) .308x1.5 Barnes #173-10
- (44) .308x1.6 LNR #68-15
- (45) .308 #62-3, 66-22, 163-3, 184-12
- (46) .30-40 #20-7, 61-23, 61-26, 100-3,
103-12, 105-3, 185-9, 190-3,
- (47) .30-06 #21-2, 41-7, 71-18, 82-20, 85-
13, 94-15, 104-5, 106-5,
115-3, 141-11, 145-5, 192-18,
#192-5
- a. "Guard" or "Gallery" loads
- (48) .30-444 #42-12
- (49) .300 Win. Mag. #62-20, 73-25,
- (50) .30 USA #172-17, 178-20,
- (51) 7.62x39 #65-9, 86-13, 88-12, 89-17,
90-4, 101-4, 120-12, 147-13,
182-15, 187-13
- (52) 7.62x39 Kern #72-17, 171-7
- (53) 7.62x46R #69-8, 72-11
- (54) 7.62x54R #79-24, 93-9, 121-18, 158-19,
173-11, 175-18, 176-17, 181-3,
186-3, 191-19
- (55) 7.65 Argentine #122-3, 167-3
- (56) .303 British (SMLE) #46-3, 48-6, 87-3, 100-3, 106-4,
147-5, 151-20, 183-10
- (57) .310 Martini Cadet #96-3, 101-13, 114-3, 116-9,

- 116-10, 122-4, 152-16,
173-14
- (58) .32 ACP #188-3, 188-7
- (59) .32 Long Colt #175-11, 186-3
- (60) .32 S&W Long #170-8, 186-3, 188-7
- (61) .32-20 #56-12, 103-20, 126-12, 174-20
- (62) .32-40 #68-9, 101-3, 116-3, 181-12
- (63) .32 Guido Ardito #96-11
- (64) .32 H&R Magnum #__-__, 170-8
- (65) .32 Miller Short #114-17
- (66) .33 Winchester #140-15
- (67) 8x33 Helbig #120-7
- (68) 8x57 #47-5, 59-4, 85-3, 158-14, 180-13,
180-15
- (69) 8x60R #148-6
- (70) 8mm Remington Magnum #55-26
- (71) .348 #67-25, 78-3, 84-18, 137-7
- (72) .35 Calibers #26-5, 42-6, 47-31, 61-3, 67-
30, 85-12, 159-13, 180-5,
186-11
- (73) .357 Mag. lever rifles #84-3, 91-14, 93-13, 171-7, 171-
12, 174-20, 183-7, 187-15
- (74) .357 Herrett #109-9, 117-8,
- (75) .35 Remington #108-3, 110-17, 143-3, 157-11,
158-13, 160-19, 161-24,
165-17, 174-16, 176-9
- (76) .350 Rem. Magnum #105-12,
- (77) .35 Whelan #73-3, 91-3, 93-16, 94-21, 99-7,
102-14, 106-10, 149-14,
149-18, 177-4, 186-10
- (78) .35 Waller #133-6
- (79) .35-30/30 #18-2, 51-12
- (80) .35 Greevy Express (.35/45-70) #56-3
- (81) .35 Winchester #157-19
- (82) .358 Hunting loads #43-3
- (83) .375 H&H #94-19, 106-10, 131-6, 133-5,
138-12, 145-9, 151-21
- (84) .375 Whelan #87-16
- (85) .375 Winchester #29-19, 31-11, 43-17, 102-14,
177-11
- (86) .38-55 #67-2, 70-17, 81-3, 82-3, 92-3,
94-11, 96-3, 105-18, 113-15,
144-25, 152-12, 165-3, 176-9,
181-18, 185-13, 185-15, 189-14
- (a) Black powder in 1885 #189-14
- (87) .38-70 #76-10, 163-11

(88) .404 Jeffery	#103-5, 121-10,
(89) .40-50 Sharps straight	#74-11
(90) .40-50 Sharps Bottleneck	#80-3
(91) .40-65	#143-12, 169-11
(92) .40-70 Sharps	#66-27
(93) .41 Mag	#72-20
(94) .41 Swiss Vetterli	#187-10
(95) .416 x 300 WSM wildcat	#175-7.
(96) .43 Spanish	#89-5, 184-21, 188-12
(97) .44-40	#50-4
(98) .44 Mag.	#36-2, 39-24, 49-21, 69-4, 83-17, 109-13, 143-14, 145-16, 173-20, 174-20, 181-20
(99) .44/63 Ballard	#161-8, 170-13
(100) 11 mm. Mauser	#43-18
(101) 11.15x58R	#167-7
(102) 11.15x60R	#110-5
(103) .444 Marlin	#39-24, 78-5, 130-10
(104) .444 straight case	#67-24
(105) .45 ACP	#180-16
(106) .45 Colt	#98-4, 113-5,
(107) .45-70 & .45-90	#30-5, 43-3, 47-33, 48-22, 49-4, 53-2, 55-29, 60-3, 68-8, 70-3, 73-3, 73-4, 75-5, 78-12, 84-23, 85-3, 91-17, 92-4, 92-16, 94-3, 98-10, 98-14, 100-20, 102-15, 105-6, 106-4, 107-6, 109-6, 113-18, 116-15, 118-13, 127-12, 131-8, 173-03, 184-14
(A) .22 Subcaliber device	#120-21
(108) .450-100-450 Express	#51-4
(109) .45 x 1.575"	#173-17
(110) .458 x 2" American	#105-9,
(111) .458 Win. Mag.	#45-5, 86-4, 87-16, 113-8, 187-22
(112) .460 Weatherby Mag	#151-22
(113) .470 Nitro Express	#120-22
(114) 12.7x44R (aka 12.17x44R)	#176-10
(115) .50-70 Springfield	#49-29, 78-12, 113-10,
(116) .50 Alaskan	#110-10
(117) .50-375	#62-4, 63-4
(118) .50 S&W	#171-16
(119) .50 Spotter	#77-17
(120) .577/.450 Farquarson	#73-5
(121) .577/.450 Martini-Henry	#118-4, 127-13, 179-7

(122) .577 Nitro Express	#182-6
(123) .577 Snider	#174-17, 178-19,
f. Cast in M1 rifle	#48-2, 63-11, 90-3, 91-20, 94-15,
g. Correlating cast & jacketed loads	#64-2
h. Experimenter class rifles	#59-20
i. Guedes 8x60R	#148-6
j. HK-91, cast bullets in	#144-26
k. K-31	#179-12, 186-21
l. Lever action accuracy	#42-21
m. Marlin	
(1) .32 Long Colt in Marlin 1892	#175-11
(2) .357 conversion to .256	#37-7
(3) .44 Mag	#173-20, 174-20
(4) Accurizing M1895	#147-15
n. Mosin-Nagant	#121-18, 173-11, 175-18
o. Palma	#190-21
p. Peabody	#153-5
q. P-14 and 1917 conversions	#150-9
r. Planning a CBA match rifle	#26-4, 61-17
s. Production	#40-4, 57-21, 149-11
t. Remington 40-X	#79-3
u. Remington 788 vs. 700	#117-3
v. Rest, custom made	#172-22
w. Rook	#153-7, 186-3, 188-7
x. Ruger #1	#132-13, 135-5, 141-13
y. Schuetzen rifles	#55-23
z. Siamese Mausers	#164-9
A. Single shot	#46-4, 90-11
B. Springfield	#90-12, 92-15, 111-12, 126-20,
	132-7, 144-8, 145-5
(1) Feeding problems	#102-3
C. Steyr SBS-96	#176-6
D. Swedish rolling block	#176-10
E. Swiss K31	#179-12, 186-21
F. Squirrel Rifles, center fire	#174-20
G. Winchester self-loading	#79-21
15. Rifling	
a. Enfield type	#65-2
b. Marlin micro-groove	#92-16
16. Rings, chamber	#4-2, 66-17, 69-8, 73-3, 74-13,
	77-10, 79-13, 80-3, 83-24,
	84-3, 91-16, 106-9, 140-13,
	142-15, 144-7, 146-20, 185-11
17. Rings, lead on case neck	#152-9
18. Rings, scope (fitting)	#61-23
19. Rolling block	#95-15

20. Round balls	
a. Loads	#106-7
b. Sizing	#63-3
21. Rubber mould casting	#33-2
22. Ruger #1 and #3	#132-13, 135-5, 141-13
23. Run out of a loaded round	#145-10
24. Rust	
a. Inhibitors	#105-14, 107-8,
b. Mould cavity	#8-4, 10-5, 19-13

-S-

1. SAFETY (casting)	#49-15, 67-30, 77-7, 105-8, 109-3, 109-8,
2. Salt, testing for	#98-7
3. Saws, lead	#20-5
4. Schuetzen	
a. AYDT actions	#177-7
5. Scope	
a. Famous maker	#185-18
b. Focusing	#163-3
c. Power, determining	#191-16
d. Rings and bases (fitting)	#61-23
e. Test for correct adjustment	#186-16
6. Seater, Mequon straight line bullet seater	#49-22
7. Seaters, adjustable breech	#73-26
8. Seating, breach	#37-23
9. Seating, depth	#17-6, 75-4, 76-4, 86-3, 110-5, 143-13, 143-15, 187-17
10. Segregating cast bullets	#68-23
11. Shield, melting pot	#152-3
12. Shot, lead (alloying)	#107-4
13. Shot loads in pistols	#169-13
14. Shoulder setback	#98-15, 140-17
15. Shrinkage voids in large bullets	#16-5
16. Sights	
a. Iron	#113-3, 113-6, 117-5, 122-18,
b. Making, front	#190-21
c. Reference setting, changes	#154-10
17. Silent loads	See "Sub-Sonic Loads"
18. Silhouette	#63-17, 72-3, 81-4, 92-13
A. Lever action	#178-19

19. Single shot rifle accuracy	#90-11
20. Sizing die	
a. Alignment	#23-13
b. Cleaning	#174-4
c. Collet	#109-11
d. Concentric	#159-17
e. Expansion	#99-11
f. Hanned Precision Coaxsizer	#60-16
g. Grossly oversize bullets	#37-23
h. Undersize sizing die	#163-24
21. Sizing	(See "Bullets" & "Cases")
22. Slam fire	#113-12,
23. Slug	
a. 20 gauge	#176-6, 178-13,
b. 12 gauge	#67-2, 127-8
c. Measurement	#145-5, 169-4, 174-5, 178-12, 184-11
24. Small bore cast bullets	#41-15
25. Smoking bullet moulds	#9-3, 10-5, 14-2,
26. Soap in bullet lubes	#168-17
27. Softnose casting	#60-15, 62-16, 81-15, 84-22, 95-20,
28. Soldering, bore	#59-2
29. Sound barrier instability	#97-4, 98-9,
30. Sound level testing	#192-3
31. Speaking Frankly:	
a. Adequate accuracy with simple techniques	#22-2
b. BOWM bullets	#52-4, 58-29
c. Case trimming	#39-5
d. Concentricity	#24-3, 163-7
e. Early CB wildcats	#31-5
f. Hoch #80 bullet	#37-9
g. Indoor shooting	#27-4, 164-4
h. Loading at the range	#54-4
i. Marlin models 93 and 36	#77-5
j. Match gun control	#66-4, 67-5
k. Medium bores for cast bullets	#23-3, 161-6
l. Memories of the .30-30	#191-6
m. Neck length & accuracy	#174-7
n. One gun solution	#68-10, 69-5
o. Roundballs in rifles	#28-8, 85-6, 165-6
p. Straight cases	#19-7, 61-4, 159-4
q. Swaged bullets (.30 cal.) & powders	#36-5
r. Swaged round balls	#44-5
s. Throat diameter	#32-4, 169-5
t. WW I military with cast	#55-7, 56-9, 57-8

u. .25-20 single shot and repeater	#60-4
v. All around load for .30s	#35-___, 172-12
e. All around bullet for .30s -- 311291	#175-5
x. .30-30	#29-3, 33-7, 46-5, 160-11, 166-12, 170-6, 190-11, #98-5, 99-5, #168-5
y. .300 Savage	#79-5
z. .303 Savage	#76-5, 168-5
A. .303 British	#58-3
B. .32 Special	#59-4
C. .300/3000 RAM	#42-6, 80-4, 158-4, 161-6
D. 8mm "J" bores and .32 cal. cast	#171-4
E. .35 caliber	#50-4, 53-4, 171-4
F. 44 Caliber Lead loads	#65-4
G. .44-40	#30-5, 49-4, 64-4, 81-5, 167-5
H. .45 caliber "concoction" load	#51-4
I. .45-70 & 45-90	#62-4, 63-4, 64-4
J. .450-100-450 Express	#73-5
K. .50-375	#70-7
L. .577/.450 Farquarson	#63-6
M. .577 Snider	#43-4, 87-13
32. Specialty loads	#71-18
33. Split nose bullets	
34. Springfield rifles with cast	
35. Sprue plates	
a. Alloy buildup	#16-6
b. Lee, fitting	#174-21, 182-12
c. Maintenance kit	#148-16
d. New (1986) RCBS sprue plates	#63-24
e. Off-Center	#6-3, 9-4, 12-4, 60-14
f. Sharp cut-off	#30-15
g. Sharpening	#175-20
h. Smaller holes	#83-20, 84-8
i. Torn sprue	#69-3
36. Squib loads	See "Sub-Sonic loads"
37. Stability, bullet	
a. In slow twist .44s	#175-16
38. Standard deviation	#113-16,
39. Steel cases, pistol	#173-3
40. Strikers for sluggish actions	#65-23
41. String measuring (targets)	#192-3
42. Stocks (fiberglass)	#37-18
43. Sub-Sonic loads (silent)	#27-9, 36-6, 40-12, 53-6, 55-29, 58-23, 61-22, 63-6, 64-5, 81-4, 85-13, 122-7, 124-12, 163-3, #44-5, 63-3
44. Swaged round balls	

- 45. Swaged bullets #112-4
- 46. Swap barrel #42-3, 42-11, 72-5
- 47. Variable sizing pressure #65-3

-T-

- 1. Table, accessory (homemade) #174-22
- 2. Tallow, salt in #98-6
- 3. Taper cast bullets (convert Lyman die) #127-15
- 4. Targets
 - a. For aging eyes #122-15
 - b. Moving backer system #49-32
 - c. String measure #192-3
- 5. Teflon
 - a. Break free CLP #142-16
 - b. Patching #69-13
- 6. Temperature
 - a. Alloy #17-9, 45-6
 - b. Barrell #88-4
 - c. Lead pot #122-3
- 7. Thompson/Contender See "Pistols & Bullets"
- 8. Thompson/Contender accuracy #43-19
- 9. Throat
 - a. 94 Winchester #110-7
 - b. Bullet, matching to #94-3, 118-15
 - c. Cast bullet chambers #61-2, 101-4, 107-3,
 - d. Castings (impact) #163-19
 - e. Diameter #32-4, 44-4
 - f. Difficult #165-4
 - g. Erosion #73-21, 154-13, 156-17, 157-5
 - h. Handi-Rifle #175-3
 - i. Lapping #154-17
 - j. Revolvers #71-14
 - k. Thompson/Contender #43-19, 44-2
 - l. Throat slugs, bumping #144-15
 - m. Wear (cleaning rods) #127-11
- 10. Tightening, primer pocket #169-3
- 11. Tips, miscellaneous #3-10, 4-4, 5-1, 5-5, 10-2, 78-27,
139-6, 144-15
- 12. Top punch, floating #177-3
- 13. Triggers #59-16,
 - a. 1891 Mosin-Nagant #118-9, 169-20
 - b. Remington 788 #118-10
- 14. Trimmer, case (powered) #140-14

- | | |
|--|------------------------|
| 15. Tubes, paper (to reduce case volume) | #126-10 |
| 16. Tubing micrometer | #151-18 |
| 17. Tumbling media | #100-21, |
| 18. Tuning | |
| a. Moulds | See "Moulds - Tune up" |
| b. Ruger #1 | #83-4 |
| 19. Turret press | #161-8 |
| 20. Twist | |
| a. Determining proper | #48-5, 121-5 |
| b. Modified formula for determining | #102-13, 121-5, 125-14 |
| c. Twist for heavy .222 | #48-3 |

-U-

- | | |
|-----------------------------|-----------------|
| 1. Ultrasonic case cleaning | #96-16, |
| 2. Uniform powder charges | #122-13 |
| 3. Unlubed bullets | #114-7, 115-13, |

-V-

- | | |
|---|--------------------------------|
| 1. V-Block (measure 5-groove) | #105-17 |
| 2. Vapor Phase Inhibitor paper (VPI) | #86-16, 87-10 |
| 3. Varmints, cast bullets on | #36-8, 67-18 |
| 4. Velocity, comparing with accuracy | #68-8 |
| 5. Velocity variation on bullet drop | #41-19 |
| 6. Velocity, high with soft alloys | #72-13, 76-4 |
| 7. Vice for making bullet moulds | #163-9 |
| 8. Vinegar, cleaning cases in | #86-6 |
| 9. V-Check | See "Visco-Check" |
| 10. Visco-Check | #155-14 |
| 11. Voids, bullets | #16-5, 127-16, 167-20, 168-16, |
| 12. Volume, case (reduction by paper tubes) | #126-10 |

-W-

- | | |
|-----------------------------|-------|
| 1. Mag wheel weight caution | #64-7 |
| 2. Wads | |

a. Cast loads	#16-6, 61-2, 68-13
b. Graphite	#108-5, 111-15
c. Milk carton, paper	#126-15
d. Poly (PVC, P-Chec)	#71-8, 74-23, 76-13, 86-12, 96-16, 96-21, 112-7, 114-8, 189-17
e. Punches	#87-9, 114-8,
f. .45-70	#60-3, 126-15
3. Wasp-waist bullet	#128-12, 130-9
4. Weighing bullets	#42-19, 132-12, 160-16
5. Weights, calculating bullet	#14-4
6. Weight variation	#114-4, 132-12
7. Wheel weights	#42-23, 71-3, 154-9, 156-19
a. Contamination	#189-14
8. Wildcats	#31-5,
a. Cast bullet wildcats	#31-5, 56-25
b. Computer program	#67-11
c. 7mm BR	#37-7
d. .30-444	#42-12
e. .30 Contender	#41-13
f. .30 x \$2.00 (.30/.35 Rem)	#56-6
g. .30 Herrett LN	#57-18
h. .300/3000 RAM	#58-3
i. .308 BR	#21-13
j. .30/357	#56-12, 60-7
k. .30 USA	#172-17
l. .35 Greevy Express (.35/45-70)	#56-3
m. .35/30-30	#18-2, 51-12
n. .35 Waller	#133-6
o. .416 x .300 WSM	#175-7
p. .50-375	#62-2
9. Wind effects on groups	#42-16, 100-12,
10. Wind flag	#125-12, 128-8, 159-9, 160-13, 164-17
11. Wire edges on bullet bases	#61-24
12. Wrench, action	#169-20

-X-

-Y-

-Z-

1. Zinc (zamak) bullets

#25-2, 27-2

*** Somehow I have managed to omit the edition and/or page to a few articles. In the event that you find these, and know what the correct citation is, please notify me so that they can be changed.
jleeguthrie@sbcglobal.net