

Math puzzles in

SAM LOYD'S  
 CYCLOPEDIA  
 OF  
 5000  
 PUZZLES  
 TRICKS  
 AND  
 CONUNDRUMS  
 WITH ANSWERS

[Cyclopedia of Puzzles by Sam Loyd (New York: The Lamb Publishing Company)  
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I have listed only puzzles of mathematical interest, omitting most of the word puzzles and all the riddles. Each puzzle that Martin Gardner chose to reprint in his Mathematical Puzzles of Sam Loyd [volume 1, 1959; volume 2, 1960; Dover Publications, Inc., New York] is listed here with a cross reference. For example, "GL2.75" is puzzle number 75 in Gardner/Loyd volume 2. Gardner cleaned up a lot of errors and inconsistencies, caused by the fact that Loyd died in 1911 before having time to straighten these things out himself.

I've also cross referenced items to Loyd's columns with Dudeney in Tit-Bits [e.g., "T30" is Tit-Bits puzzle 30], and to Dudeney's columns in The Weekly Dispatch [e.g., "P144"], and to Loyd's columns in the Brooklyn Daily Eagle [BDE]. In a few cases I also list other newspapers where Loyd published this material or something very similar.

(Thanks to Will Shortz for letting me see some of the Loydiana in his fantastic collection. References to any Loyd publications outside Tit-Bits or the Brooklyn Daily Eagle should be cleared with Shortz before being published elsewhere, since I think he plans to compile a comprehensive index himself.) CP means Dudeney's Canterbury Puzzles; AM means Dudeney's Amusements in Mathematics.

A puzzle with a title like "Sam Loyd's Turf Puzzle" is called just "Turf puzzle" here. He evidently had a regular feature in some newspapers, like a comic strip, and the woodcuts were simply copied to the Cyclopedia.

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\* denotes a miscellaneous problem in algebra and/or geometry

- 7 The Royal Road to learning: circle with seven cuts [T6]; right triangle with integral sides, one of which is 47; why is a sword curved? GL2.4
- 8 The squarest game: what subsets of {3,6,9,12,15,19,21,25,27,30} sum to 50? GL1.56
- 9 Patch quilt puzzle: girls' names packed as subpaths of 5x4 array of letters
- 10 Picture of Casey's cow: \* GL2.166
- 11 Bicycle tour: Hamiltonian path through 23 cities [Phil Inquirer 1899.05.14; Denver Post 1900.03.04; Sunday Record Herald (Chicago) 1902.08.17] GL1.2
- 12 Puzzles from a hardware shop: \*
- 13 A teeter puzzle: \*
- 13 Turf puzzle: \*
- 14 A Swiss puzzle: dissect Swiss flag to square, Greek cross to square or triangle, three squares to one [T2, T3, T4] GL2.144
- 15 The literary burglars: discussion of combination locks
- 16 Grandfather's problem: trick of troy weight versus avoirdupois GL1.81
- 17 The pony puzzle: assemble pieces to make a decent looking pony GL1.45
- 18 The mystery of the boarding house pie: six straight cuts of a circular disk GL2.119
- 19 The cat and dog race: \* GL1.16
- 19 A study in division: "permute" 316 to make it divisible by 7 GL2.96
- 20 Puzzling scales: \* GL1.104
- 20 Heclai's path: 14 straight lines d4 to e4 cover an 8x8 array GL1.94
- 21 Military tactics: rook tour f1 to e1, include d5-e5; also rook tour h4 to h3, do not include b6-b7 GL1.33, GL2.8
- 22 The rogue's letter: detective story
- 22 Convention puzzle: \*
- 23 What happened: dissect a humorous picture
- 24 The monkey's puzzle: traveling salesman problem on small irregular grid GL2.111

- 25 The St Patrick's Day parade: Chinese remainders GL1.57
- 26 The monad puzzle: dissect yin-yang into 4 congruent pieces, also into horseshoe shapes [see Dudeney in TWD 1901.05.05, 1901.09.08] GL2.62
- 26 Laundry puzzle: \* GL2.89
- 27 The Smart Alec puzzle: dissect a mitre (square minus triangle) to a square [his answer is incorrect] GL1.93
- 27 Puzzle for the juveniles (Loyd age 9): connect three houses to three gates GL1.82
- 29 Rebus about parrots [T8]
- 30 Our prize time puzzle: \* GL2.83
- 31 The story of "butcher boy": \* GL1.116
- 32 The gold brick puzzle: 24x24 compared to 23x25 [cf AM413] GL1.24
- 34 The cheese problem: six 3D cuts [T7 had seven cuts] GL1.112
- 35 Puzzleland school: boys' names packed as subpaths of 5x4 array of letters
- 36 Weary Willie and Tired Tim puzzle: \* GL2.11
- 37 The pig sty problem: 21 pigs in four pens, each contains 4k+1 [like P308; Loyd's assertion of uniqueness is incorrect] GL2.7
- 37 Peterchen's pretzel: one cut can make how many pieces? [MP147]
- 38 Duck shooting at Buzzard's Bay: 10 points in 5 lines of 4, closest to the pattern 1+4+4+1 GL1.96
- 38 A tricky problem: make 14 from five odd figures GL2.69
- 39 The patch quilt puzzle: 13x13 into fewest square pieces [P225; Denver Post 1900.02.11] GL1.76
- 39 The lost cent (or the Covent Garden problem): \* GL1.60
- 41 After dinner tricks: aaaabbbaa -> abababab in four moves of adjacent pieces [P108] GL1.73
- 44 Lewis Carroll's monkey puzzle: monkey, rope, pulley, and counter-weight GL2.1
- 46 Easter 1903: dissect Greek cross into rectangle GL2.34(3)  
The swastica sign: dissect into a square GL2.79
- 47 Some evolution puzzles (word ladders): for example, he takes NORTH->SOUTH in seven steps (NORTH,FORTH,FORTS,TORTS,TOOTS,TOOTH,SOOTH,SOUTH) [but my program saves one step: NORTH,FORTH,FORTS,SORTS,SOOTS,SOOTH,SOUTH]
- 47 Sam Loyd's puzzle of Dutch goat, goose, cow: \* GL1.48
- 48 The necklace puzzle: join 12 pieces of chain [like T25] GL1.47
- 49 Making change at the florists: \*
- 49 Hill puzzle: \*
- 50 The weight of a brick: \* GL2.58
- 50 Racing puzzle: \* GL2.76
- 51 The ship's carpenter: dissect rectangle to square
- 51 Pensioner's puzzle: \* GL2.73
- 52 Milkman's puzzle: measure (2,2) from (10,10) into (5,4) [Women's Home Companion 34,3 (March 1907) 36] GL2.23
- 52 Puzzle of the twins: \* GL2.98
- 53 A puzzle in oil and vinegar: \* GL2.39
- 53 The hammock puzzle: minimum cut in net [Womens Home Companion 33,8 (Aug 1906)44; cf the simpler network in PCP192] GL2.2
- 53 Puzzle of how old was Mary? \* GL2.10
- 54 The patrolman's puzzle: odd-length-rook-move tour adj to all internal points GL2.33
- 54 Puzzle of Little Bo-Peep: \* GL2.45
- 55 Cats and kittens puzzle: \*
- 55 Clock dial: when are the hands exactly opposite? GL2.13
- 56 The admiral's problem: pass thru 5 tricky points
- 57 Frankfurter sausage problem: \*
- 57 The herd of camels: \* [T37]
- 57 Puzzle of Biddy's age: \* GL2.29
- 58 The Greek cross: dissect square into two crosses (equal; also unequal) [T27, T30]
- 58 Bargain counter puzzle: \* GL1.15
- 59 The scholar's puzzle: 6 points in 4 lines of 3 GL2.19
- 59 Kangaroo puzzle: 12-letter word jumps down [BDE 1896.12.13; T33] GL2.165ans
- 60 The royal road to mathematics: five pieces make a square, cross, parallelogram, rectangle, right triangle, and trapezium GL2.147
- 60 Real estate puzzle: \* GL2.160
- 60 A remarkable cut price puzzle: \* GL2.40
- 61 Puzzleland Park: connect 8 houses to 8 gates [T53]
- 62 Mother's jam puzzle: \* GL2.148
- 62 Election puzzle: \* GL1.90
- 63 Vaudeville puzzle: three straight lines enclose six sheep
- 63 The story of the fish: \*
- 64 Deaf and dumb alphabet: with sample text
- 65 The Darktown patch quile puzzle: 12x12 into eleven square pieces

- 66 Mrs. Pythagoras' puzzle: dissect 12x12+5x5 into 13x13 [cf P405] GL1.37  
67 A short talk about telegraphy: short story in Morse code  
68 Trading lots puzzle: GL2.81  
69 The house of Betsy Ross: explains 5-pointed star cutouts  
70 The problem of squaring the circle: discussion about pi  
71 The fire escape puzzle: escaping in a small basket (like river crossing but with weight constraints) GL2.140 [similar to P164 = Hoffmann P4.28]  
72 A question of time: \* GL2.21  
73 Cross and crescent: dissect Greek cross to crescent [CP37] GL2.18  
74 A puzzling mixture: of milk and water GL1.83  
75 The convent problem: \* GL1.107  
77 The centennial problem: make 100 as sum from {0,1,...,9} and four dots GL2.53  
78 Multiplication and addition: phi^2 times phi = phi^2 plus phi GL1.53  
78 Domestic complications: \* GL1.97  
79 The fighting fishes of Siam: \* GL1.110  
80 The ferry boat problem: \* GL2.14  
81 The potato race puzzle: \* GL1.103  
82 The moving day puzzle: 5-puzzle, fewest moves AB/C0/DE -> BA/xx/xx [Philadelphia Inquirer 1900.05.13] GL2.36  
83 The plumber's problem: box minus lid with least area [P281] GL1.18  
84 Tell mother's age: \* GL1.85  
85 A daisy puzzle game: Kayles with 13 petals [BDE 1896.10.18, T43] GL2.57  
86 The great pool puzzle: \* GL1.55  
87 Free acres: enclose as many acres as 12-foot rails [cf T52] GL1.63  
88 Missing numbers: division with concealed digits GL2.100  
89 Primitive railroading: two trains must pass, only one switch [MP48] GL1.95  
89 Dollars and sense puzzle: reversing digits  
90 Counting the coins puzzle: \*  
91 The Dutchmen and their wives: \* GL1.92  
92 The great diamond robbery: jewels go but locally OK [cf P268] GL2.108  
93 The lily problem: \* ascribed to Longfellow GL1.25  
94 The missing number: add a+b from {0,1,...,9}, erase two digits GL2.100  
95 The famous hot cross bun puzzle: \* GL2.163  
95 Eleven men in ten beds: fallacy [P17]  
96 Ancient order of the iron cross: dissect St Andrews (or Maltese) cross to square [P369] GL2.128  
97 A battle royal: checkerboard dissected in eight pieces [Sunday Record-Herald (Chicago) 1902.07.27; St Louis Globe-Democrat 1903.03.08] GL1.51  
98 The Guido mosaics: dissect 5x5 into 4x4+3x3 GL1.79  
99 Problems of history: a/b from {1,2,...,9} to equal 1/2, 1/3, ..., 1/9 [P376; Chicago Sunday Record-Herald 1903.02.15; St Louis Globe-Democrat 1903.08.30] GL2.74  
100 The bottle problem: equitable division of wine and bottles [P466] GL1.89  
101 Pythagoras' classical problem: dissect axa+bxb into cxc [T1]  
102 Tricks with matches: wordplay GL2.15  
103 The man with the hoe: \* GL1.23  
104 The boxer's puzzle: dots and boxes game GL1.91  
105 Picket posts: 16 pieces on 8x8, no three in line, two in center [cf P324] GL2.48  
106 Back from the Klondike: shortest path problem supposedly like a whirlpool [NY Journal 1898.04.04; cf the earlier version, T45] GL1.74  
107 Jack and the box puzzle: dissect irregular hexagon into square GL2.118  
108 Fore and aft puzzle: Halma on 3+3+5+3+3, allowing jump over your own man [NY Journal & Advertiser 1899.04.23/sol1899.05.07 in 47 moves; St Louis Globe-Dem 1903.11.29/sol1903.12.06 again 47, but 31 if diag moves also allowed; T66 did not allow jumping over your own man] GL1.4  
109 Puzzle of the Dewey pillow: Hamiltonian king path on 5x5 spells a motto  
110 Crows in the corn: 8 queens with no three in a row [BDE 1896.12.20; T14] GL1.114  
112 The domino puzzle: maximum points scored [T35; P366]  
113 Disputed claims: three right triangles with integral sides, same area [cf P445, CP107] GL2.124  
114 Monte Carlo puzzle: odds of a dice game GL1.5  
115 North pole puzzle: distances GL2.138  
116 Newsboys' puzzle: \* GL2.9  
117 Aesop's eagle: goes 500 miles west each day [cf T9] GL2.141  
117 How to make diamonds: from two congruent pieces  
118 King Ptolemy's great puzzle of the Egyptian pyramids: dissect equilateral triangle to square [P440]  
118 Skeins of silk and worsted: \* GL2.120  
120 Couldn't tell a lie: \*  
121 The inspector's problem: \* GL2.47

- 121 Ancient Egyptian puzzle: square, triangle, and circle in profile [cf P484]  
121 Candy puzzle: \* GL2.116  
122 The little brown jug: count paths REDRUM&MURDER [BDE 1897.01.10; T12]  
    GL2.61  
123 Squaring accounts, a temperance puzzle: \* GL2.65  
124 The pony cart problem: \* GL2.37  
125 Smith's age puzzle: \* GL1.99  
126 A question of peaches, pears, persimmons and plums: four disjoint solutions  
    of 10 points in five lines of 4, in 8x8-2x2 [BDE 1897.02.07; T24] GL2.70  
127 Professor Blumgarten and the Peace Congress: \* GL2.139  
131 The Chinee donation puzzle: Hamiltonian king path in 4x6 spells a message  
132 Old beacon tower: how many steps in helix? [BDE 1897.03.21; T29] GL1.26  
134 A corner in wheat: evaluate  $1 + 2 + \dots + 2^{63}$   
136 The Christmas turkey: count steps in snow GL2.121  
137 The flying bird: does it change weight of enclosing box? [BDE 1896.09.13]  
138 Cross country running: \* GL2.94  
139 The golf puzzle: best two strokes to reach {150, 225, 250, 275, 300, 325, 350,  
    400, 425} [cf P331] GL1.77  
140 The Chinese cash puzzle: \* GL1.111  
141 Mixed teas: \* GL1.70  
142 The time problem: two hands coincide after 1 o'clock GL1.43  
143 A square deal: dissect  $1 \times 1 + 4 \times 4 + 8 \times 8 = 9 \times 9$  GL2.115  
144 The moon problem: five straight cuts of a crescent [MP106]  
    (the text says six cuts but the answer is for five) GL1.101  
145 The moon problem: volume of a ball GL2.12  
147 The crusaders: dissect Turkish emblem to Crusader's cross GL2.51  
148 A problem in diamonds and rubies: \* GL1.39  
149 The tinker's puzzle: \* GL2.72  
150 The hoop-snaky puzzle: reassemble with tail in mouth GL1.17  
151 The only square game on the beach: \* GL2.55  
152 The joiner's problem: dissect  $1 \times 2$  minus corner into square [T40] GL1.40  
153 The old gag revived: \* (10 dozen eggs)  
154 The leaning tower of Pisa: \* GL2.32  
155 Problem of the bridges of K\onigsberg: with eight bridges, enumerate  
    the Eulerian paths GL1.28  
156 The general store puzzle: cryptarithm CHESS+CASH+..+SHEEP = ALLWOOL GL2.30  
157 The Red Cross Lassie puzzle: dissect one Greek cross into two [cf T27]  
    GL1.20  
158 False weights: \* GL1.80  
159 The ailing nephew: relationships GL1.22  
160 The foot ball problem: \* GL1.35  
161 Plato's cubes: solve  $x^3 = y^2$  to agree with picture GL1.17  
163 The monastery window rebus  
164 Alice in wonderland: count paths WASITACATISAW [P182, P189, ...] GL1.109  
165 The steeplechase puzzle: \* GL2.154  
166 Puzzle of grand-father's clock: \* GL2.91  
167 The switch problem: Two trains must pass [BDE 1897.03.14; T28;  
    St Louis Daily Globe-Democrat 1903.08.08]] GL2.24  
169 The great Columbus problem: egg placing game [P500] GL1.65  
171 Dividing the spoils: \* GL2.54  
172 The grindstone puzzle: when is it half gone? [BDE 1896.08.09; T51] GL1.14  
174 The oracle puzzle: \* GL1.66  
175 The sedan chair puzzle: cut a picture GL1.11  
176 A Chinee switch-word puzzle: 12-letter word reproduces itself  
    [BDE 1896.07.26; T5] GL1.54  
177 The great horse show: cut horseshoe into seven pieces GL1.6  
178 Gingerbread dog's head: dissect into two congruent pieces GL1.102  
180 Puzzle of the pyramids: \*  
181 Cabbages puzzle: \* GL2.52  
184 The Gordian knot: to be untangled from scissors GL1.117  
186 Chickens in the corn: checkers-like (wazir) capture by parity [P269] GL1.9  
187 Lincoln's rail puzzle: max area enclosed by 12 rails GL2.134  
188 The merchant of Baghdad: Loyd's famous measuring puzzle [T13] GL1.108  
189 Going into action: fewest connected lines to cover 8x8 starting at a5  
    [BDE 1896.07.12; T26] GL1.46  
190 A lip-reading puzzle: identify boys saying their names  
191 Weighing the baby: \* GL1.50  
194 The new star puzzle: fit a star into the picture GL1.1  
195 At the "zoo": \* GL2.77  
196 The Thanksgiving turkey: \*  
197 Heard at the "zoo": write 1906 in radix 8 GL1.105  
198 Christians and Turks: Josephus with large increments [cf P283] GL2.42  
199 Red Cross volunteers: dissect square into two Greek crosses [see

pages 58 and 157] GL2.93  
199 Riding against the wind: \* GL2.49  
200 An old saw with new teeth: dissect two ovals into circle [P460] GL2.60  
204 Dividing his flocks: \* GL2.99  
204 The lucky boys: \* [same as Odds and Evens puzzle, page 319]  
205 Archimedes and the crown: \*  
206 Hod carrier's problem: \* GL1.88  
207 Summer tourists: cross a river, ladies can't row, etc GL1.75  
208 Dickering at Manila: \* GL1.12  
211 A problem in chances: count derangements [AM267] GL1.113  
213 Outwitting the weighing machine: given the weights of ten pairs,  
what are the five original weights?  
213 The price of eggs: \* GL2.3  
214 The young carpenter's puzzle: dissect square into house-shaped pentagon  
GL1.100  
215 Freshman impertinence: \*  
216 Cherry Hill gossip: \* GL2.106  
217 Tom the piper's son: \* GL2.28  
218 Aesop's Fables up to date: riddle  
218 Strike puzzle: \*  
219 The electrical problem: \* GL2.149  
219 Fido's age: \* GL2.46  
220 Puzzling trip from Bixley to Quixley: \* GL1.10  
221 Clever young carpenter: divide chessboard into max different pieces  
[AM293] GL2.71  
222 The Henry George puzzle game: 12-letter word matches pattern [cf P165]  
GL2.165 [by the way, the correct answer is REHABILITATE; was this known?]  
222 The missing link: simplified version of chain puzzle on page 48 GL2.25  
223 The tower of Hanoi: 13 disks [Lucas; P68]  
223 Clothes line puzzle: \* GL2.152  
224 Puzzle of an eccentric will: \* GL2.162  
224 Billiard puzzle: \*  
225 Family puzzle: \* GL2.38  
226 Postmaster's puzzle: \* GL1.62  
226 Mystery puzzle of "cinch": \* GL2.85  
227 The juggler: dissect five triangles to square  
228 The building of Solomon's temple: \*  
229 Infantry drill: BGBGBG -> BBBBGGGG (reverse of puzzle on page 41) GL2.161  
230 Two men and a ditch: \*  
231 Sailing under false colors: dissect flag, change 15 stripes to 13  
[cf Dudeney's PC3 in The Weekly Dispatch 1903.12.20]  
232 Rip Van Winkle puzzle: Kayles with 1+11 [P430] GL2.6  
233 A trip through the dictionary: what words end with -cion? [P499]  
234 The goose puzzle: dissect goose into egg GL2.43  
235 The 14-15 puzzle in Puzzleland: 15-puzzle challenges, e.g. to magic  
square [PCP245; but I prefer starting out pure, which is T66] GL1.21  
235 Great picnic puzzle: \* GL1.106  
236 Telegraph pole puzzle: \* GL2.68  
237 Bungaloose craps: 109778 into radix 6 GL2.114  
237 Drovers' puzzle: \* GL2.27  
238 Darktown kindergarten: dissected checkerboard; also a cryptarithm  
238 Puzzle of Jack and Jill: \* GL2.22  
239 Three cats: \*  
239 Worth their weight in gold: \* GL1.38  
240 A study in eggs: 6x6 no three in line, two corners filled [cf P324;  
Chicago Sunday Record-Herald 1902.11.30; St Louis Globe-Democrat  
1903.05.10; Elizabeth Journal 1909.01.27] GL2.84  
240 Turkey puzzle: \* GL2.104  
241 The architect's puzzle: 5x25 to be rearranged [BDE 1896.06.07; T17]  
241 The canals on Mars: Hamiltonian path on 20 vertices, spells out  
"There is no possible way" GL1.69  
242 Merry go round puzzle: \* GL2.50  
242 Heidelberg puzzle: \*  
243 Puzzle of the old woman who lived in a shoe: how many children?  
243 Letter carrier's route: shortest Chinese postman path on 3x4  
243 The dice game: twenty-five up [T38]  
244 The archery puzzle: make 100 from {16,17,23,24,39,40}\* GL2.92  
244 The mathematical cop: \* GL1.42  
245 The three napkins: dissect square into three [T3] GL1.58  
246 Hardware store puzzle: rebuses  
246 Business puzzle: \* GL2.105  
247 Bluebeard: lip reading; also  $axb=c$  from  $\{0,1,\dots,9\}$  [cf T36]  
248 Truth stranger than fiction: dissect square into six squares (also p 307)

- 248 Credit check puzzle: \* GL2.125  
 249 Little Bo-Peep: make three squares from 4 short matches and 4 long ones [AM198] GL2.159  
 250 Swiss navy: Swiss flag to square; Swiss cheese in five slices; chessboard into max distinct pieces (see pages 14 and 221)  
 250 Abacus puzzle: \* GL2.150  
 251 Trading in the Phillipines: Bachet's weights GL2.82  
 252 Our Columbus problem: Make 82 from {0,4,5,6,7,8,9} and eight dots GL2.136  
 252 Puzzling prattle: \* GL2.67  
 253 Horse trade puzzle: \* GL2.158  
 254 Battle of the four oaks: divide square into four congruent pieces, each containing one tree GL1.49  
 255 Switch board problem: shortest rook tour h2 to a1 [BDE 1896.11.29] GL2.145  
 256 Egg puzzle: how high is it safe to build a pyramid of eggs?  
 257 Puzzle of the red spade: dissect spade to heart [P385] GL1.59  
 258 Playing the systems: win 777777 GL1.64  
 259 In ancient Greece: draw triangular path with fewest turns [P368] GL1.8  
 260 The boy's age: \* GL1.32  
 261 A maze  
 261 Rent puzzle: \* GL2.103  
 263 The monastery treasure: \*  
 264 Inverness to Glasgow: \* GL2.56  
 265 The miser's puzzle: \* GL2.17  
 266 The four elopements: four jealous couples cross a river, with island [P270] GL1.31  
 267 The lake puzzle: \* GL1.36  
 268 Beating the record: \* GL2.101  
 268 A study in hams: \*  
 269 Puzzling partnerships: \* GL2.117  
 269 Weary Willie puzzle: \*  
 270 Easter morn: dissect square to cross [BDE 1896.04.05; T2, T23] GL2.34(1)  
 271 The Chinese puzzle: dissect square to rectangle with three holes GL1.115  
 272 Uncle Sam's fob chain: \* GL1.30  
 272 Banana puzzle: \* GL2.110  
 274 The puzzle of Martha's Vineyard: max grape vines, at least 9 feet apart, in square plot 1/16 acre [cf P455] GL1.7  
 275 Counting chickens before they are hatched: \*  
 276 The yacht race: \* GL1.67  
 277 Thanksgiving turkey shoot: divide {1,1,1,2,2,3,3,5,5,10,10,10,20,20,20, 25,25,50} into three equal parts  
 277 Director's puzzle: \* GL2.88  
 278 The Deadwood Express: \* GL1.72  
 279 The reaper's problem: what strip around 1x2 field takes half the area? GL2.90  
 280 Endless chain puzzle: put 13 pieces into 8x8 so that ends match up  
 280 Puzzle in marbles: \* GL2.130  
 281 The battle of Hastings:  $13x^2+1=y^2$  [cf P333] GL1.68  
 282 Puzzle from Mother Goose: cut the pie without harming 24 blackbirds  
 282 Chicken puzzle: \* GL2.31  
 283 High Court in Puzzleland: divide patches into two equal parts  
 284 King Solomon's seal: count triangles; also trace with fewest straight lines [cf page 259] GL2.142  
 284 Engineer's puzzle: \* GL2.127  
 285 Puzzleland gingerbread: dissect irregular shape to square; also a vague second problem GL2.26  
 285 Labor puzzle: \* GL2.164  
 286 Spelling bee: 45 hexagonal cells in triangle spell a sentence via a Hamiltonian path; also traverse in fewest turns (no answer given) GL2.75  
 286 Mixed tea puzzle: \* GL2.131  
 286 Longfellow's bees: \* GL2.87  
 287 The mathematical milkman: \* GL2.126  
 287 The conscientious milkman: \* GL2.5  
 288 Dr. Slasker in Puzzleland: reassemble chessboard in 63 or 65 cells [P188]  
 288 Stage puzzle: \* GL2.63  
 289 Two from one: dissect 13x13 into 12x12+5x5 with grid cuts (see page 66) [NY Journal 1898.04.17 similar; St Louis Daily Globe-Democrat 1902.11.30] GL2.97  
 291 Profit from bicycle: \* GL1.13  
 292 The plaid shawl: checkerboard-b1+c0+g0-h1 dissect into real checkerboard  
 292 The game of checkers: simplify the board; what's the shortest game? (12 moves by each player)  
 293 Who will get the nomination: jump 8 men a la solitaire GL2.112  
 293 Presidential puzzle: cover 7x7 points with fewest straight strokes

- 294 Sultan of Sulu: dissect isosceles-triangular flag to square  
295 Trolley puzzle: \*  
296 Chicken: dissect it into an egg shape GL2.113  
297 The crazy clock of Zurich: with wrong mechanism, when is display correct?  
GL1.98  
298 The postman's puzzle: rook tour with strange constraint  
298 Another version of the four oaks problem (page 254) [P220]  
299 Trading in Puzzleland: \* GL2.78  
299 Triangular pyramids: which can be combined to make another such?  
300 London Tower: connect five pairs of points;  
also, rook path h1 to c5 with fewest turns GL2.41  
300 The chess-playing colonel: \* GL1.29  
301 Egg tricks: 9 points in 10 lines of 3; cover 3x3 with fewest straight lines  
GL2.133  
301 Wine puzzle: \*  
302 The moonshiners of Puzzleland: measuring and mixing apple jack and cider  
GL1.52  
302 Trading chickens: \* GL1.27  
303 Whist table arrangements: for 10 pairs at 5 tables  
304 Foraging: \*  
305 King of Siam in Puzzleland: shortest Hamiltonian path on 4x4 grid (with  
Euclidean distance) ending at c4; also move elephant to mid-flag GL2.102  
305 Palmistry puzzle: \*  
306 Baron Munchhausen in Puzzleland: Hanoi problem, 3/29/15678 -> //1223456789  
306 Carrying puzzle: \*  
307 Jolly friars puzzle: even rows, columns, and diagonals in a 4x4  
(including the short diagonals) GL2.155  
308 Danish flag puzzle: \* GL1.78  
309 Don Quixote and Sancho Panza: \*  
309 Grain puzzle: \*  
310 Remnant bargains: dissect square plus triangle of area 1/8 [P273;  
BDE 1897.01.24] GL2.109  
311 Grocer's puzzle: quickest way to divide 20lb sugar into ten 2lb bags,  
using balance scale with 5lb and 9lb weights  
311 Melon puzzle: \*  
312 Puzzleland races: \* GL1.61  
312 Salary puzzle: \* GL1.84  
313 Tug o' war puzzle: \* GL1.34  
313 Partnership puzzle: \* GL2.151  
314 Graces and muses: \* GL2.95  
315 The courier problem: circumnavigating a moving square array GL2.146  
316 Coin puzzle: \*  
316 Apple puzzle: \* GL2.129  
316 Investment puzzle: \* GL2.156  
317 William Tell in Puzzleland: make 100 from {11,13,31,33,42,44,46} GL2.122  
318 Whittington's cat: Hamiltonian knight path on 3x4 GL2.157  
318 Coming to town puzzle: \* GL2.44  
318 The lost star: find perfect star in stained-glass window pattern GL1.19  
319 Odds and evens: seven coins = \$3.90; what six allow 3-way split?  
319 Annuity puzzle: \*  
320 Whist puzzles:  
320 Chess puzzle: white mates in three  
321 Reapers' puzzle: \*  
322 Tandem puzzle: \* GL2.123  
323 Get off the earth: paradox of vanishing man  
323 Jack Sprat puzzle: \* GL2.16  
324 Catch Christmas turkey: a capturing game [P362] GL2.107  
324 Charity puzzle: \* GL2.66  
324 Peanut puzzle: \*  
325 The time o' day: when are hour and minute hands equidistant from 12?  
325 Automobile puzzle: \* GL2.135  
326 Nautical problem: move four of 2x5 array, obtain 5 lines of 4 GL2.59  
326 Guggenheim's turkey puzzle: \* GL1.3  
327 Draw an ellipse [P123]  
327 Puzzle of the census man: \*  
328 Workshop problems: \* GL2.20  
329 Lawn tennis puzzle: odds of winning a knockout tournament  
329 The building loan plan: \* GL1.87  
329 The peddler's puzzle: \* GL2.35  
330 Moving wheel [BDE 1896.08.30; cf AM203]  
330 The installment puzzle: \*  
331 Remnant puzzle [P273], described more clearly than on page 310 GL2.80  
331 Diamonds and crosses: dissect Greek cross to diamond GL2.34(2)

331 Tortoise puzzle: \* GL2.143  
332 Perplexed professor: \*  
333 Cattle puzzle: \* GL2.153  
334 Political puzzle: \* GL2.132  
335 Sea serpent puzzle: \* GL1.44  
335 Cat and dog puzzle: \*  
336 Skating puzzle: \* GL2.137  
337 Conductor's puzzle: \* GL2.86  
338 The pistol match: 48 from {2,4,6,10,20,40,50,100} GL1.86  
339 Puzzling scales: \* GL2.64