By JIM TIMMERMANN

When Jerry Slocum cleans his attic, his toys will head for a museum.

The 52-year-old Beverly Hills man's "toys" form the largest collection of mechanical puzzles in the United States, if not the world. More than 8,000 puzzles—from delicately carved ivory ring puzzles from China to every conceivable variation of the Rubik's Cube—line the walls and fill the shelves of Slocum's upstairs collection room and spill over into his garage. The collection will be the main source for the world's first formal exhibition of puzzles, which Slocum is preparing for the Craft and Folk Art Museum in Los Angeles next year.

**Slocum's Passion**

Mechanical puzzles—distinguished from their crossword, jigsaw and mathematical cousins by the fact they require active manipulation of a physical object—have been Slocum's passion since he received a Japanese barrel puzzle from his parents at age 8. Slocum is still an avid puzzle solver, but his interest now extends into the art, history and sociological background, as well.

"There are a lot of people who collect puzzles just to work them," according to Sharon K. Emanuelli, senior curator of the Craft and Folk Art Museum. "Jerry's researching everything there is to know about them."

**Organized With Thoroughness**

Slocum, a Hughes Aircraft engineer whose 2,000-volume library may also be the world's largest collection of books about puzzles, notes that mechanical puzzles have been an integral part of popular culture and the source of international fads, since the early 19th Century. In that time they have taken on innumerable shapes and forms.

Ring puzzles, geometric dissections, assembly and take-apart puzzles, intricate riddles of wood, wire and string, dexterity games, trick-opening locks and boxes, and scores of cubic puzzles all have their own place in Slocum's taxonomy, which he has organized with thoroughness and attention to detail of an engineer, which he has been for nearly 30 years.

The puzzles come from throughout Europe, Asia and North America. Many are works of art, such as Slocum's 1820 ivory tangram set and his collection of intricate metal assembly puzzles by the Spanish sculptor, Berrocal. They range from a six-piece interlocking wood puzzle the size of a match head to hefty "puzzle jugs" that defy challengers to take a drink without託king themselves at the same time, and they commemorate historical events from presidential elections to the eruption of Mt. St. Helens.

"People Like the Challenge"

What accounts for the enduring popularity of puzzles? Just what you might think, says Slocum: "People like the challenge of a puzzle... They like the challenge of matching their wits against a physical object."

The normally soft-spoken Slocum becomes enthusiastic when he talks about what makes a "good" popular puzzle. "The best puzzles are simple and elegant in concept," he says. "The essence of a good puzzle is that it is amazingly difficult."
One classic example is the Chinese ring puzzle. Invented in the 3rd Century, according to legend, the puzzle is a double-barreled rod with a number of interlocking rings. The goal is simple—remove the rings from the rods—but the solution requires a complex though very logical sequence of moves that takes so long that many Europeans and Chinese used the puzzle as a very effective lock. Even knowing the sequence, taking off 10 or 11 rings may take hours. “If the number of rings is increased to 20,” says Slocum, “so many moves would be needed that the puzzle cannot be solved in a lifetime.”

Like art, the most challenging puzzles also force the player to view the world from a different perspective. Even the simplest of puzzles can seem impossible to someone locked into a rigid right-angle view of the world, as Slocum demonstrates when he challenges a visitor to form four simple wooden geometric shapes into the letter T. After 15 minutes of frustration, Slocum consoles the visitor: “A lot of people have trouble with puzzles like this because their perspective is ingrained. Ten-year-olds are great at puzzles because they’re not locked in by convention.”

Although puzzles in various forms have been around nearly as long as recorded civilization, they did not gain widespread popularity until the 19th Century, when Europe and North America were awakening to the increase in leisure time created by the Industrial Revolution. The tangram, a set of seven carefully cut geometric pieces that can be rearranged to form a myriad of shapes, was the subject of an international craze between 1811 and 1820. “It was the Rubik’s Cube of its day,” says Slocum.

Sixty years later, American inventor Sam Loyd’s “14-15” sliding block puzzle swept the United States. Loyd offered a $1,000 prize to anyone who could solve the puzzle by reordering the numbered blocks into a certain sequence. “It drove the world wild,” says Slocum. The only catch was that it was mathematically impossible to reorder the puzzle successfully from Loyd’s starting point.

Many puzzles were invented as teaching aids to help students learn problem-solving strategies. Hungarian teacher Erno Rubik supposedly invented his famous cube to help his students learn spatial relationships, while local puzzle collector Solomon Golomb, a professor of mathematics and electrical engineering at USC, has proposed in scientific journals that cubic puzzles such as Rubik’s can be used as microscopic models to explain the movement of quarks in particle physics.

The popular stone and brick tangrams produced by the German firm Richter & Co. from 1892 to 1965 began as teaching aids, and form a major part of Slocum’s collection. The puzzles were popular throughout Europe, Slocum explains, and just before World War I, Richter licensed production to a British firm. A few years later, soldiers from both nations were supplied with the puzzles to relieve the boredom of life in the trenches. “There they were,” says Slocum. “British and German soldiers just a few hundred yards apart were trying to solve the same puzzles.”

‘Trial of the Century’

Slocum started accumulating his collection as a teenager and college student, but his collection didn’t really blossom until 1975, when his two sons had left home for college. From 1,000 puzzles then, his collection has grown eight-fold in less than 10 years. Some puzzles were obtained through other collectors, while others were picked up on puzzle-hunting expeditions abroad. Many were obtained from antique shops that considered them mere curiosities.

While his collection may not be the world’s largest—other collectors say similar-sized collections exist in Great Britain and Canada—Slocum has certainly earned a position of prominence in the small world of puzzling. He has brought together puzzle collectors from throughout the world every year with his annual International Puzzle Party, which began in 1977. The 1984 mini-convention, held at Slocum’s home recently, brought together approximately 40 collectors from the United States, Japan, Great Britain, Canada, Finland and Holland.

Slocum’s reputation as a puzzle authority took him to Delaware earlier this year for the puzzle world’s “trial of the century.” A Massachusetts inventor named Larry Nichols had sued the American marketers of Rubik’s Cube, claiming that the popular puzzle infringed on his patent for a similar but smaller cube, puzzle he developed years before Rubik. As the key expert witness, Slocum testified that Nichols’ cube represented a major innovation in the puzzle world. “I would rank it at the top of the list of breakthroughs.” A verdict is not expected in the trial until this fall.

Although the details have not yet been finalized, Slocum says his exhibit will include several thousand puzzles from his and foreign collections and will use a book he is writing on puzzles as a catalogue. He promises the exhibit will also include many oversized puzzles to give the public “hands-on” experience. But will he provide the solutions?

“One of my rules is not to tell people how to solve a puzzle,” he says. “The joy of working a puzzle is discovering the secret yourself.”

Timmermann is a Los Angeles writer.