



19th CENTURY CHINESE IVORY PUZZLE SETS

Ivory puzzles were manufactured in China for export to Europe and America from about 1820 to 1930. The Tangram was invented in China around 1800; however most of the other puzzles had been known in Europe much earlier.

Ships bringing silk, porcelain, and other cargoes to Europe and America would often bring a few of these sets as gifts for the owners and officers families.

During the early 19th century ivory puzzles from China were the most commonly seen puzzles. This, plus the supposedly enigmatic nature of the Chinese, led to the supposition that the Chinese had invented them all and to the adoption of the generic name "Chinese Puzzle" for all kinds of mechanical puzzles.

The puzzles were often exported in black lacquered boxes containing from nine to twenty puzzles held in position by a supporting structure made of cardboard covered either in blue silk or red paper.



TANGRAM PUZZLE. All seven pieces are used to make different shapes. Try making each of a square, triangle, and rhombus. Then try making each shape

again with a hole the size and shape of any one of the pieces (e.g. A rhombus with a square hole). Often Tangram puzzles were accompanied by two xylographic books. One contained around 300 problems, and the other the solutions. There are many modern books of Tangram problems.



PUZZLE BALLS from 5 to 20 concentric balls. They are very fragile so handle with great care. As a puzzle use a thin toothpick or quill (not a pen, pencil or anything strong) to get all the holes lined up down to the centre as they were when they were originally carved from a single piece.



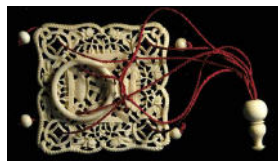
Chinese Export Ivory Puzzles



CHINESE RINGS.

Remove the assembly of wires and rings from the handle and loop. Do not use any force or you will bend or break the wires. The solution is an easy and interesting sequence of moves in a binary sequence. For every extra ring on the

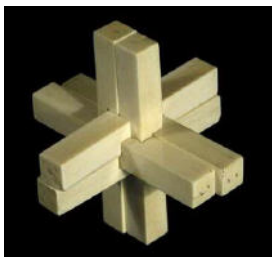
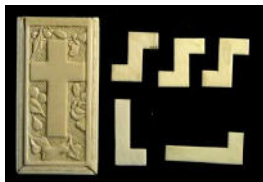
puzzle the number of moves is doubled: It takes 256 moves to remove nine rings and of course another 256 to put them back again.



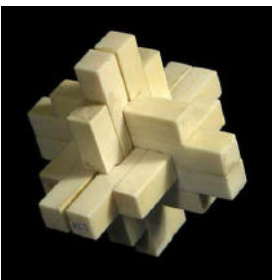
IMPERIAL SCALES. Remove the ring and then replace it, without untying any knots.



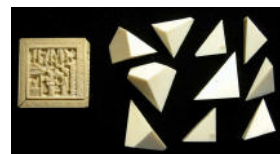
CRUCIFIX PUZZLE. Make a flat crucifix with the five pieces. There are two kinds of crucifix as shown here. The pieces do not fill the box completely in either version.



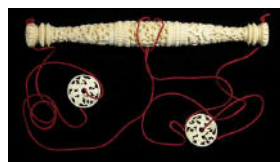
SIX PIECE BURR. Make a three-dimensional cross with three pairs of pieces crossing each other at right angles.



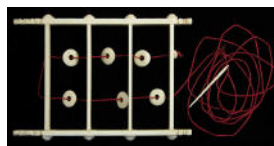
TWELVE PIECE BURR usually has the 4 pieces in each direction side by side.



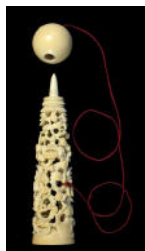
DISSECTED CUBE Ten pieces must be put back in the box. The secret is to make two right angle prisms outside the box: One from the 6 triangular pieces, and one from the two pairs of odd piece.



BAR AND TWO BEADS. Get the beads together on the same loop then get them back to their separate loops. No knot untying allowed



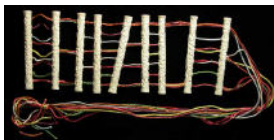
LADDER PUZZLE. Start with one bead between the rungs of the ladder on both sides, then get the six beads all together on the cord. They must never come off the cord.



CUP & BALL.

Throw the ball in the air and catch it on the spike, the cup is much too easy. It is perhaps better to not

play with this as the heavy ball can easily damage the carving or break the cup.



NINE RODS & STRINGS.

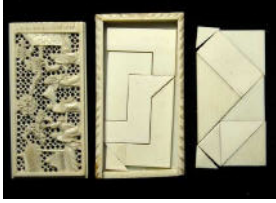
This is a simple toy - slide the rods up and down and see the different arrangements of coloured strings. After it has been played with by a small child, it is a good and serious puzzle to untangle it.



TWO PLAQUES PUZZLE.

These were made in many shapes. The puzzle being to separate the two plaques from the string then get it back again as shown.

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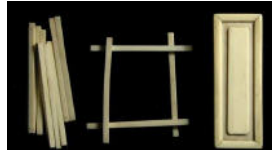
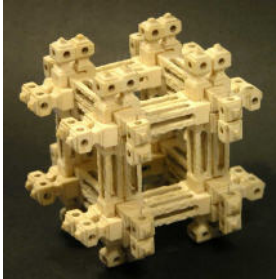
FIFTEEN PIECE PUZZLE.
Like the tangram all fifteen pieces are used to make different shapes.



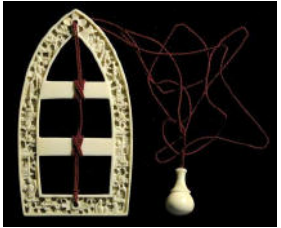
THREE PIECE BURR. Has flattish pieces with holes as shown. Sometimes the ends are carved as birds.



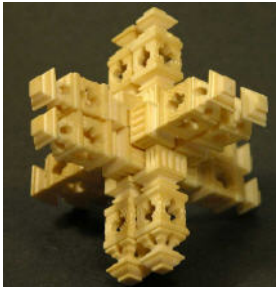
FIVE SQUARE PUZZLE
Make One Square from these Five Squares. Presented here as a 10 piece puzzle.



STICKS. Ivory matchsticks for traditional match puzzles.



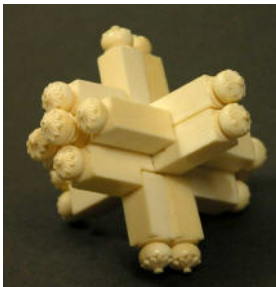
THE BOAT PUZZLE. Remove and return the rope and "anchor"



ACROBAT. More of a toy than a puzzle: with one, two, or four acrobats the object is, by using the handle only, to get them all to hang by their feet, or by one foot, from the bars



CHINESE SQUARE. Formed with 16 triangles. Four of each of 4 sizes; they do not fill the box.



LETTERS. Sets of ivory Alphabet letters for spelling games.

OTHER BURRS. Most have plain pieces but some were beautifully carved. If found in pieces it can be a puzzle to discover what to build as well as how to build it.



FOUR Ls and Four Zs. Make a Square. Fill the box in two layers with three holes.



REEF KNOT is usually made of Tortoise shell but is sometimes included in larger sets. The object is to get the cord loop off, then back onto the central rod.

Chinese Export Ivory Puzzles



THE HEART. Object to remove the string with the bead, without untying the knot or, of course, cutting the cord.



OTHER IVORY PUZZLES not necessarily made in China sometimes find their way in with the Chinese made ones. Here is a "34" puzzle which started as a European puzzle. Some of the carved burrs may be of this type.

THE BARREL & BALL PUZZLE.



The barrel contains a ball which can be seen through the hole in the top. The pestle fits loosely into



FOUR KEYS PUZZLE. The objective is to remove the keys from the keyhole. This is not as easy as it appears as the keys flop into a jumble and the ends seem to large to fit through the hole.



CUBE THROUGH A CUBE.

This demonstration of a mathematical curiosity (a cube can pass diagonally through another of the same size) is infrequently found in Cantonese compendia. Consisting of 2 solid cubes and another with its framework.



The latter is so fragile it is usually found broken into two triangular prisms and two triangular wedges.

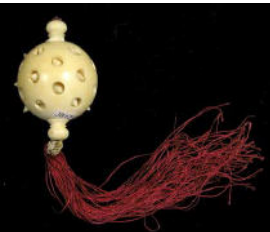
CANNON & CORD.



Remove the beaded string without untying the knot.



TOP with SPINNER



BALL WITH MOVEABLE SPIKES. Occasionally found with the puzzles. Argument continues as to their use. Suggestions range from ornamental tassel to erotic stimulator.



SPILLIKINS. A game for any number of players. All the spillikins (usually 20 to 40) are dropped onto the table in a heap. The next player then uses the hook piece to remove one of the spillikins without disturbing any of the others. If successful he tries to remove another and continues until the piece under attack is disturbed when the hook is passed to the next player.

Having started on one piece a player is not allowed to switch his attack to another until it has been removed from the pile. When the last piece has been removed from the table, the person with fewest spillikins is the first player in the next game, and the holder of the most drops them on the table. The more complicated shapes have a higher values than the simple ones. Traditionally a "woman" counted 5 and an "axe" 50.

Often sets of these puzzles are found with damaged or lost pieces. This is due to ignorance as to the function of the puzzles. This leaflet illustrates some of the individual items that were included in them, and it is hoped that copies of this leaflet will be left in the boxes to reduce further damage.

Chinese Puzzles v12.ppp

Updated versions may be found at **The Puzzle Museum.**

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