Fifteen Puzzle

a.k.a. Game of Fifteen, Sliding Numbers, Gem Puzzle, Boss Puzzle, Le Taquin, ...
Old idea dating back at least to circa 1880, this version copyright ThinkFun 2000.
(metal with plastic case, 2.5 inches; keychain 1.75 inches)

Packaged with 1 through 15 arranged by row (lower right empty). After sliding pieces to mix it up, one must return to the starting position. The back of the box says that this one reproduces a 1933 design called the IMP:

To solve, the top two rows are easy, then cycle the 7 pieces on the last two rows, taking "short cuts" as needed to rearrange the order of pieces in the cycle.

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Other Fifteen Problems

Here are some other problems from the back of the ThinkFun Mini Fifteen keychain. The first, to make a magic square with the empty square counting as 0, is the Spanish Dungeon of H.E. Dudeney 1917 (see Baxter's Page). The last, the reversing problem, is noted as impossible.
The Fifteen-Fourteen Problem

A parity argument implies that half the puzzle configurations cannot be reached from any given configuration. For example, the starting position of the Fifteen-Fourteen puzzle shown on the left below has 14 and 15 exchanged, making the standard solution impossible (although as shown on the right below, solution is possible with the empty square in the upper right).

![Fifteen-Fourteen puzzle images]

*Fifteen-Fourteen, used by J. A. Storer as a child circa 1965.*
(plastic, 2.5 inches)

Here is a proof that the Fifteen-Fourteen problem cannot be solved, based on the presentation on the Wikipedia Page:

Define the *count* of a position to be the number of pairs of pieces that are out of order plus the number of the row that contains the empty square (rows are numbered 1 to 4). The *parity* of a position is *even* if its count is an even number and *odd* otherwise. Moving a piece one left or right does not change the position count since this does not change the ordering of pieces or the row number of the empty square. Moving a piece vertically always changes the position count by 4 because it changes the order with respect to three other pieces and changes the row number of the empty square by 1. Hence, since both 0 and 4 are even numbers, each move preserves position parity, and all positions reachable from a given starting position must have the same parity. Thus, the 1-15 position cannot be reached from the 1-13-15-14 position because these positions have different parity.

In general, if you can get to where you have the position you want to reach except that in one place two adjacent squares are exchanged, then that position cannot be reached. For example, if someone gives you a what looks like a fifteen puzzle in a mixed up position, you can try to make the standard 1-15 position and either be successful or arrive at the 1-13-15-14 position (and be certain that this is a Fifteen-Fourteen puzzle for which a 1-15 solution is not possible). As another example, the *reversing problem* is not solvable, because it is possible to get to an almost reversed position except that the 1 and 2 are exchanged, as depicted below:

![Reversing problem images]

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Fifteen-Fourteen Problem Continued

"The Cross Number", circa early 1900's?
(wood box and 15 wood pieces, 4+3/8" x 4+3/8" x 1/2";
directions on top specify a solvable version of the Fifteen-Fourteen problem)

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The Fifteen Magic Square Problem (a.k.a. 34 Problem)

Old versions of the fifteen puzzle typically had pieces that could be removed, and sometimes a piece 16 was included that was not used to play the normal fifteen puzzle, or left in for making a magic square of the numbers 1 to 16, defined as an arrangement so that the four rows, the four columns, and the two diagonals all sum to 34. One example is the Boss puzzle shown on the next page, which refers to this as the "Thirty Four" problem. Here is another:

"Le Taquin", manufactured by JJE Paris, circa 1880's.
(wood box and 16 wood pieces, 3.9 by 3.9 by 3/4 inches;
shown on page 61 of the Fifteen book,
the French directions on the inside top cover describe both 15 and magic square)

The idea of magic squares dates to over a thousand years ago; here are two old designs shown on the Wikipedia page:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>12</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>16</td>
<td>3</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>15</td>
<td>4</td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>14</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>

The Winning Ways book (page 778-783) discusses the design of 4x4 magic squares and notes that the 880 ways to do it for the numbers 1 to 16 (not counting reflections and rotations) was worked out in 1693 by Frenicle de Bessy; see also the Wolfram Mathworld page.
Combined Puzzles

Many puzzles sold combined problems for fifteen and sixteen pieces; here are the front and back of directions that came with a "2 puzzles in 1" keychain puzzle:

**Instructions for Playing the "16" Puzzle Game**

(A) **When competing with a friend**
1. Set both puzzle arrangements identically. Example — Spiral.
2. Select another arrangement. Example — Peripheral.
3. Start together — First to complete new arrangement wins.

(B) **When playing alone**
1. Check time for completing arrangements (average time — 15 minutes).
2. One to Sixteen (1 - 16), Sixteen to One (16 - 1). Odds first, Evens first, & vertical are listed as impossible. CAN YOU DO THEM?
Note — [16] is molded or impressed in each vacant square.

(C) **See examples on reverse side.**

**Instructions for Doing the "34" Puzzle**

A. The object of this puzzle is to arrange the numbers 1 thru 16 in such a manner that any group of four numbers horizontal, vertical, diagonal or in adjacent (grouped) position add up to "34" See diagram explanation on reverse side.

B. Note — [16] is impressed in each vacant square.

C. Use the [16] in the vacant squares as the key to various arrangements in which all groups of four numbers total "34" — as explained above.

D. See complete and incomplete sample arrangements on reverse side.

E. When sample arrangements are incomplete (numbers left out) the object is to fill in the missing numbers in order to make all totals of four numbers equal "34" vertically, horizontally, diagonally and in adjacent or grouped position.

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The Boss 15 and 34 Puzzle

"BOSS THE NEW GAME OF FIFTEEN", W. H. Cremer, London, 1880. (cardboard box and 16 wood pieces, 3.5 by 3.5 by 5/8 inches; 15 diagram on underside of the box top, and 17 page booklet about the 34 puzzle; similar to the puzzle shown on page 73 of the Fifteen book)

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Messrs. CREMER'S Establishments are the largest of their kind in Europe; their stock includes the best of everything in the way of Toys, Dolls, Games, and Knick-knacks, selected with the utmost care; their large commands enable them to offer superior articles at a more moderate cost than is usually the case. Visitors who desire to expend but a small amount will find a wonderful collection of pretty gifts, suitable for all ages, at 6d. and 1s. each.

Unlike the Establishments of France, Germany, and other countries (which, although admirable, confine their sale generally to native production) Messrs. CREMER's stock embraces the manufactures of every clime and is most varied and original in its character. A visit is respectfully requested.

**ALBRECHT DÜRER**

**GAME of the THIRTY-FOUR.**

This wonderful combination of the number Thirty-four is over four hundred years old, hence its interest as a novelty in pastime. It consists of 16 cubes numbered 1 to 16. These are to be so-arranged in the box that the additional sum of 34 may be reckoned up in eighteen different ways, namely, perpendicularly, horizontally, cross-wise from corner to corner; by the four numbers forming each group of four blocks at the corners; by the four outside corner numbers; and by the two outside numbers. See Albrecht Dürer's celebrated Painting of "Melencolia."

Members of the two centre lines at the top and bottom, also the two centre numbers on each side as shown in the subjoined diagram:

<table>
<thead>
<tr>
<th>16</th>
<th>3</th>
<th>2</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>10</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>14</td>
<td>1</td>
</tr>
</tbody>
</table>

Albrecht Dürer and Boss may be played either in company of one or more, or as a Solitaire game; in either case these games will be found of no ordinary interest.

CREMER, Junior,
310, REGENT ST. AND 27, NEW BOND ST.
(Copyright.)

**“BOSS.”**

They who, from the present explanation, can learn how they may be able to move number for number in order to find an exact sequence, must feel deceived when we explain that only half the possible combinations can succeed.

**Key to the Boss Puzzle:**

Of the 15 blocks used in the game, 8 are with little trouble placed in the prescribed succession, and so are four of the remaining 7, either in a straight line, thus, 9, 10, 11, 12, or in two columns: 9, 10—11, 12, 13, 14—15, with the last three, which offer six combinations, this can be accomplished only in three cases. The three remaining are absolutely insolvable.

The six combinations of the last three blocks are:

1. Exact Solution.
   - Lowest, Mean, Highest.
   - 1, 3, 2. Insolvable.
   - Low, High, Middle.
   - 2, 1, 3. Insolvable.
   - Middle, Low, High.
   - 2, 3, 1. Solvable.
   - Middle, High, Low.
   - 3, 1, 2. Solvable.
   - High, Low, Middle.
   - 3, 2, 1. Insolvable.
   - High, Middle, Low.

These combinations repeat themselves always: if we begin with 1 and leave off with 15; or commence with 15 and end with 1, we may first operate upon the side numbers, or the middle lines. With every combination which the 15 blocks allow, after entire permutation, the move terminates in one of the six combinations of the last three blocks; and of these there remain for solution only the three before mentioned, but not the other three. With the absolute impossibility, through the removal of the blocks of the last two rows, to arrive at a solution, the game finishes. If we try by shifting the blocks already firmly set in the first two rows, we are launched in a new game. The possibility of a systematic

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scheme for carrying out this experiment is out of the question. It falls to the lot of patient zeal to win back the solvable combinations from the consequent confusion, which must be regarded as it were a new beginning; and accident accomplishes what system leaves without result.

**Examples:**

1) Move 1. 2. 3. 4
   5. 6. 7. 8
   9. 10. 11. 12

And the following combinations remain:


2) Move 1. 6. 7. 8 or 6. 7. 8. 4
   5. 10. 11. 12
   9. 13. 14. 15

And the figures remain:

A. 2. 3. 4. Solution  G. 1. 2. 3. Solution
B. 2. 4. 3. Insolvable  H. 3. 1. 2. Insolvable
C. 3. 4. 2. Solvable  I. 2. 3. 1. Solvable
D. 3. 2. 4. Insolvable  K. 2. 1. 3. Insolvable
E. 4. 3. 2. Insolvable  L. 3. 2. 1. Insolvable
F. 4. 2. 3. Solvable  M. 3. 1. 2. Solvable

5 and 9 are moved away.

**Solutions to**

<table>
<thead>
<tr>
<th>F</th>
<th>4. 2. 3</th>
<th>M</th>
<th>3. 1. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6. 7. 8</td>
<td>6. 7. 8. 4</td>
<td>1. 4. 2. 3</td>
<td>3. 1. 2</td>
</tr>
<tr>
<td>1. 4. 2. 3</td>
<td>1. 2. 3. 4</td>
<td>6. 7. 8. 4</td>
<td>3. 1. 2</td>
</tr>
<tr>
<td>1. 2. 3. 4</td>
<td>1. 2. 3. 4</td>
<td>1. 6. 7. 8</td>
<td>3. 1. 2</td>
</tr>
<tr>
<td>1. 2. 3. 4</td>
<td>1. 2. 3. 4</td>
<td>1. 6. 7. 8</td>
<td>3. 1. 2</td>
</tr>
</tbody>
</table>

We select at the outset the top and the bottom row:

1. 2. 3. 4 we are 5. 6 × ×
   6. 7. 8. 4
   5. 1. 3. 4
thus able 9. 10 × ×
   2. 3. 1. 4
to range
and they are solvable: 7. 8 11. 7 8. 11
   8 7
   3. 1. 4
   2. 3. 1. 4
   9. 10 × ×

We can test, with less trouble, by some irregular combination, the accuracy of our plan, and at the same time the practicality of the chosen combinations.
A combination of this kind may be given:

6. 1. 3. 4
5. x x 15
11. x 14
10. 9. 12. 13

The numbers which are wanting here are 2. 7. 8
Of which are solvable:

2. 7 8. 2 7. 8
- 8 - 7 - 2

 Insolvable:

2. 8 8. 7 7. 2
- 7 - 2 - 8

Finally, the combinations already given are as follows:

<table>
<thead>
<tr>
<th>Figures</th>
<th>Translated into words</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. 3. 4</td>
<td>Middle.</td>
</tr>
<tr>
<td>1. 2. 3</td>
<td>High.</td>
</tr>
<tr>
<td>7. 8. 11</td>
<td>Solvable.</td>
</tr>
<tr>
<td>2. 7. 8</td>
<td></td>
</tr>
<tr>
<td>13. 15. 14</td>
<td>Low.</td>
</tr>
<tr>
<td>2. 4. 3</td>
<td>High.</td>
</tr>
<tr>
<td>1. 3. 2</td>
<td>Middle.</td>
</tr>
<tr>
<td>7. 11. 8</td>
<td></td>
</tr>
<tr>
<td>2. 8. 7</td>
<td>Insolvable.</td>
</tr>
</tbody>
</table>

14

15. 18. 14
3. 4. 2
2. 3. 1
8. 11. 7
7. 8. 2
Middle.
High.
Low.
Solvable.

14. 13. 15
3. 2. 4
2. 1. 3
8. 7. 11
7. 2. 8
Middle.
Low.
High.
Insolvable.

15

15. 14. 13
4. 2. 3
3. 1. 2
11. 7. 8
8. 2. 7
High.
Low.
Middle.
Solvable.

8. 7. 2
Insolvable.

From the continued recurrence of the same combinations we argue the correctness of our solution. Opposite assertions must be regarded as erroneous, until the contrary is shown by the printed tabular diagram.

MESSRS. CREMER

Are celebrated for the Entertainments and Amusements

They provide for Evening Parties—Garden Parties—Fancies—at Home—Weddings—Birthday Rejoicings—Comings of Age—Fancy Fairs—And for all other Festive occasions.

MESSRS. CREMER,
210, REGENT ST. and 27, NEW BOND ST.
By Special Appointment to H.R.H. The Prince of Wales and the Principal Courts of Europe.

Great exertions are being made by Messrs. Cremer to secure an unrivalled collection of Novelties. Confidential Agents of ability are appointed in the various cities of Europe. Mr. Cremer, Jun., is personally visiting the whole of the toy-producing districts. The perfect knowledge, gained by the experience of a lifetime; an intimate association with the leading manufacturers; a careful study of the requirements of the age, combined with much originality of design, enables the firm to offer a class of Toys, Dolls, Games, and Pastimes that it is hoped will continue to command the consideration of those who desire, in the culture of the youth of England, to provide recreation of a pleasurable and enjoyable character.

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An 1880 Newspaper Column On The Fifteen Puzzle

This clipping was tucked into a copy of the 1893 Hoffmann book; from the text on the reverse side, it appears to be from a February 13, 1880 issue of an Albany newspaper.
IMP Puzzle - On Which the ThinkFun Version Was Based

Shown on page 102 of the *Fifteen* book. This 2.5 inch square metal puzzle was made in the 1933 to 1934 time frame in a number of similar variations, including different pegs on which the pieces slide (round vs. square), different colors, different text on the sides of the puzzle, different cases (shiny vs. textured red), similar but different booklets (all are 2.25 inches square with the same cover graphics), and even a *braille* version.

- **Round pegs with black and white tiles,**
  bottom edge says MADE IN U.S.A.,
  left edge says "IMP" PAT. APPLIED FOR,
  right edge says MODERN BRANDS INC. N. Y.,
  top edge is blank

- **Square pegs with black and white tiles,**
  bottom edge says "IMP" PAT. APPLIED FOR MADE IN U.S.A.,
  top edge says MODERN BRANDS INC. N. Y.,
  other edges are blank

- **Square pegs with black and red tiles,**
  bottom edge says "IMP" PAT. APPLIED FOR MADE IN U.S.A.,
  top edge says MODERN BRANDS INC. N. Y.,
  other edges are blank

- **Square pegs with red and white tiles,**
  bottom edge says "IMP" PAT. APPLIED FOR,
  top edge says IMPORTED BRANDS INC. N. Y.,
  left and right edges are blank

- **Square pegs with blue and white tiles,**
  bottom edge says "IMP" PAT. APPLIED FOR,
  top edge says IMPORTED BRANDS INC. N. Y.,
  left and right edges are blank

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**IMP 1934 Booklet - Modern Brands**
(from the black & white round peg MODERN BRANDS version shown above)
IMPROVED MODERN BRANDS

The Ultimate in Puzzle-Games

- The most fascinating—and baffling puzzle game ever invented.
- There are over a TRILLION possible combinations of the numbers 1 to 15—which should give you a fair idea of how much entertainment awaits you as the owner of an IMP.

- IMP is the greatest amusement value of all time—as it would take more than TWO MILLION years to solve all the problems—if you completed a new combination every minute.
- In playing with IMP the idea is first to try to duplicate all the possible problems in this booklet (the impossible ones are for sceptics and may be used to battle your friends.)
- When you've worked out all the problems in the booklet, you're ready to have some real fun with IMP. Write the numbers 1 to 15 in any combination on a sheet of paper—then try to duplicate it on the game—you'll never know until you try whether it's a possible or an impossible problem.
- Arrange an IMP party (they're the rage in London, Paris, Berlin, Rome,

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IMP 1933 Booklet - Party Bridge Play Inc.
(from the black & red square peg IMPORTED BRANDS version shown above)
IMP Undated Booklet - Imported Brands Inc.
(from the blue & white square peg IMPORTED BRANDS version shown above)
Graphic Versions of the Fifteen Puzzle

Many fun and promotional versions of the Fifteen puzzle have been made with graphics of some kind rather than numbers. Sometimes the graphics are such that every square is unique, and so it is really exactly the same puzzle as the standard Fifteen. However, when there are two pieces that are identical, as is the case with each of the four Warner Brothers puzzles shown below, it is possible to be stuck at a configuration where the puzzle is finished except that two adjacent pieces are out of order. In this case, solve the puzzle with the positions of the two identical pieces exchanged. For example, for the bugs bunny puzzle shown below, the pieces that go in positions 5 and 9 are identical (note that this is not the case for positions 8 and 12 because piece 12 is not quite blank); if you are not able to complete the last two rows because of this problem, move the blank piece that appears to go in position 9 to position 5 (causing the blank piece that was in position 5 to now be in the last two rows), and now solve the last two rows.

_Bugs Bunny, Warner B. 1979._ (plastic, 4.8 by 3.9 inches)

_Bugs Bunny / Daffy Duck, Warner B. 1979._ (plastic, 4.8 by 3.9 inches)

_Road Runner, Warner B. 1979._ (plastic, 4.8 by 3.9 inches)

_Tweety, Warner B. 1979._ (plastic, 4.8 by 3.9 inches)

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(card is 4.4 by 5.6 inches, puzzle is plastic 2.5 inches by 1/4 inch thick)
Roalex Versions of the Fifteen Puzzle, Continued

"Popeye", "Superman", "Yogi Bear", "Pebbles", Roalex Co., Forest Hills, NJ, circa 1950's and 1960's. (card is 5 by 6 inches, puzzle is plastic 2.5 inches by 1/4 inch thick)

The Roalex Co. made numerous Fifteen puzzles based on cartoons and TV shows; some based four related characters in each of the columns (such as the Popeye puzzle above) and some on individual characters (such as the Superman puzzle above that J. Storer played with as a child). These puzzles on their original cards (which sometimes had an extra piece on top) are a popular for collectors (see further reading).

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Roalex Versions of the Fifteen Puzzle, Continued

(card is 6.1 by 5.3 inches, puzzle is plastic 2.5 inches by 1/4 inch thick)

Although many Roalex cards were horizontal ones of an approximate shape of width 1.25 times height as with the version of Popeye on the preceding page, other shapes were used, including a shape of about height 1.14 times width, such as this version of Popeye.

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Roalex Versions of the Fifteen Puzzle, Continued

Here is what is on the back of the Popeye card of the preceding page:

get toys FREE
WITH EVERY SUBSCRIPTION
TO FAMOUS
JACK AND JILL
CHILDREN’S MAGAZINE

SPECIAL OFFER
10 ISSUES ONLY $3.00
You get a 50¢ Bonus Toy Certificate for TOY HOUSE play tested toys—at no extra cost . . . with every subscription.
2 YEARS (24 ISSUES) FOR ONLY $6.95
You get a $1 Bonus Toy Certificate for TOY HOUSE play tested toys—at no extra cost . . . with every subscription.
JUST DO THIS . . Fill out coupon and mail. (Please print)
For extra subscriptions make up your own coupons.

JACK & JILL, Dept. L938, Philadelphia, Pa. 19105

NAME__________________________

STREET________________________

CITY________________STATE______ZIP CODE

Length of subscription: 10 issues $3.00 □ 2 Yrs. $6.95 □
If renewal mark X here □ Bill Me □ Payment enclosed □

Signature of parent or adult paying for subscription

(Address if other than address above)

A Bonus Toy Certificate redeemable at your local store will be promptly mailed each child receiving a subscription.
Other Versions of the Fifteen Puzzle

"Gem Puzzle No. 0", Matthias Rice, December, 1879.
(3.25 inches square by 1/2 inch thick cardboard box and 15 wood pieces; shown on the cover page, page 8, and page 11 of the Fifteen book, which dates this puzzle and gives some history)

The top of the box top says "THE GEM PUZZLE No. 0", the bottom of the box top says "Place the Blocks in the Box irregularly, then move until in regular order.", the left and right sides have been scratched out on this one, but originally on the left side was "MANUFACTURED BY M. J. RICE" and on the right side "For CARY, FULTON & Co., No. 29 Kingston Street, Boston."

Although the theme of the Fifteen book is that the origin of the Fifteen puzzle is unknown, it does indicate that the high popularity of the puzzle in the 1880 time frame started with this production of the puzzle in December of 1879, and describes a March 1, 1880 interview of Mr. Rice published in the Boston Herald that describes how he got the idea for making the puzzle from a version made in Hartford by deaf students, and sold for 75 cents apiece.

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Other Versions of the Fifteen Puzzle, Continued

"Drueke's 15 Puzzle", Wm. F. Drueke & Sons, Grand Rapids, Mich.", circa 1960's.
(plastic, 2.5 inches square by 3/16 inch thick)

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Other Versions of the Fifteen Puzzle, Continued

"15-Puzzle", Rudolph Steiner, NY, circa 1950's.
(cloth pouch, plastic puzzle, and cardboard instructions, 2.5 inches; the back says THE "15-PUZZLE", ARRANGE NUMBERS. HORIZONTALLY, VERTICALLY, DIAGONALLY, OR IN SPIRALS, ETC., PAT. APPLIED FOR, RUDOLPH STEINER CO., N.Y.C. U.S.A.)

"Lowe's 15-Puzzle", circa 1950's.
(felt lined pouch, plastic puzzle, and cardboard instructions, 2.5 inches; shown on page 103 of the Fifteen book)

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Other Versions of the Fifteen Puzzle, Continued

"15 Puzzle", Lowe's, circa 1940?
(4.75" square by 1" leather covered box with fifteen 1" square by 1/2" wood pieces)

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"Great 16 Puzzle", Tit-Bits Teaser No. 6, circa 1930's.
(wood pieces in cardboard box, 3.6" square x 3/8" thick)

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Other Versions of the Fifteen Puzzle, Continued

"Celebrated Fifteen Puzzle", Fairy Queen Steamer, circa late 1800's?
(wood pieces in hinged wood box, 2.3" square x 3/4" thick)

The Fairy Queen steamer boat is mentioned in the 1885 Thorough Guide Series for Scotland; here is an excerpt from page 185:

Loch Eck Route. From Dunoon the coach take the coast-route through Kirn, Hunter's Quay—leafy and luxuriant—and Sandbank, whence it proceeds round the head of the Holy Loch into the Echaig valley, whose waters connect Loch Eck with the sea. At Innerchapel the passengers are transferred to the little steamer "Fairy Queen," which conveys them the whole length of the loch.

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Other Versions of the Fifteen Puzzle, Continued

Wood box with inlay of dancing couple and 15 wood pieces, 1837 ???
(4.6 inches square by 1 inch thick, pieces are 1 inch square by 1/4 inch thick, the date 1837 is hand written on the back)

This box has a beautiful inlaid top showing a dancing couple and looks quite old. The date of 1837 written on the back raises the fun possibility that this puzzle pre-dates the 1880's Fifteen puzzle craze that is documented in the Fifteen book. However, it is hard to give this date too much weight; it could have been written by anyone at anytime. Below are photos of the inside, which looks quite similar (including the hinges) to the inside of the Souvenir d'Egypt puzzle (made in France) that is shown on page 97 of the Fifteen book.

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Other Versions of the Fifteen Puzzle, Continued

(4.5" square by 7/8" wood box and sixteen 1" diameter by 3/8" round painted wood pieces; 
paper label on box top and rules on underside of box top; 
same box as the one shown on page 25 of the Fifteen book)
"Little Buttercup Puzzle", B. F. Gould, 40 Bromfield St., Boston, 1880.
(cardboard box and 15 wood pieces, 3 by 3 by 1 inch;
the ridged tops have the numbers 1-15 and the smooth bottoms have letters
(close-ups of the piece P / 5 are shown above),
the directions on the box top ask you to spell LITTLEBUTTERCUP
(the fourth T and the C are a too worn to read in the photo above),
the Fifteen book shows this puzzle on pages 20, 36, and 49
where it credits manufacture to B. F. Gould and shows a Feb. 1880 advertisement)

Hopkins, Oxford, NY, circa 1880's.
(wood tray and 15 wood pieces, 3.7 inches;
1 is a bit burned, 5 is damaged, and 10 was lost and replaced by a blank,
the back is stamped "J. A. Hopkins MAKER Oxford NY",
from J. A. Storer's grandfather in Oxford NY)
Other Versions of the Fifteen Puzzle, Continued

"The Game of Fifteen Gem Puzzle", manufactured by Alan L. Lovejoy, Boston, 1880. (cardboard box, wood tray, and 15 wood pieces, 3.75 by 3.75 by 3/4 inches; shown on page 19 of the Fifteen book where it cites manufacture and date)

"The Game of Fifteen Gem Puzzle", circa 1880. (cardboard box, wood tray, and 15 wood pieces, 3.75 by 3.75 by 3/4 inches; shown on page 23 of the Fifteen book; box says "SENT TO ANY ADDRESS FOR 25 CENTS")
Other Versions of the Fifteen Puzzle, Continued

"Double Puzzle Of Crack Brain And Thirty Four", Heyer Brothers, Boston, circa 1880.
(cardboard box, wood tray, and 16 wood pieces, 3.9 by 3.9 by 3/4 inches; directions on the inside of the box top; shown on page 40 of the Fifteen book)

Copyright J. A. Storer
Other Versions of the Fifteen Puzzle, Continued

(cardboard box and 16 wood pieces, 3.25 inches square by 9/16 inches;
shown on page 34 of the Fifteen book;
includes piece 16 to have the magic square as a second puzzle)

Copyright J. A. Storer
Other Versions of the Fifteen Puzzle, Continued

"The Boston Puzzle", circa 1880's.  
(cardboard box and 15 wood pieces, 3 inches square by 5/8 inches; different than the "Boston Puzzle" shown on page 24 of the Fifteen book)

Copyright J. A. Storer
"The Puzzle Of 15 and 16", circa 1880's.
(cardboard box and 16 wood pieces, 3.25 inches square by 51/2 inches;
shown on page 38 of the Fifteen book;
"This little puzzle looks simple and easy but TRY IT ONCE."
this one came with an article from a 1926 newspaper that reflects on the Fifteen Puzzle
as something from the past when R. B. Hayes was president)

Copyright J. A. Storer
(cardboard box and 15 wood pieces, 4.2 inches square by 5/8 inches;
directions on the inside of the box top;
Shown on page 30 of the Fifteen book, but listed with a different English manufacture;
a very similar box top is also shown inside the cover of the Fifteen book)
Other Versions of the Fifteen Puzzle, Continued

German, circa 1880's.
(cardboard box and wood pieces, 2.5 x 2.5 x 3/8 inches;
shown on page 121 of the Fifteen book)

On the page of the Fifteen book that shows this puzzle is a nice discussion of how newspapers from February and March of 1880 had a large number of "notes, articles, and poems that claimed that the Fifteen Puzzle was driving solvers insane and overcrowding the lunatic asylums".

"15 Puzzle", Spear Works Bavaria 1915.
(cardboard box and wood pieces, 4 x 4 x 5/8 inches;
shown on page 119 of the Fifteen book where it cites manufacture and date)
Other Versions of the Fifteen Puzzle, Continued

"Gem Puzzle" by John Heywood, Manchester, UK, undated. (cardboard box and 16 wood pieces, 3.4 x 3.4 x 1/2 inch; shown on page 29 of the Fifteen book)

"15 and 34 puzzle", De La Rue & Co., London, circa 1880. (cardboard box and 16 wood pieces, 3.75 x 3.75 x 5/8 inch; shown on page 35 of the Fifteen book)

Copyright J. A. Storer
"King George VI Coronation Puzzle", circa 1937.
(cardboard box and 16 cardboard pieces, 4.25 x 4.25 x 1/4 inch;
inside of box top has directions;
inside of the box bottom advertises Meadow Butter;
both the puzzle pieces and the box top have photos of the royal family;
to read about king George VI, see for example the Wikipedia Page)
Other Versions of the Fifteen Puzzle, Continued

"Magic 16 Puzzle", Copyright the Embossing Company, Albany, NY, 1930. (3.3" x 3.3" x 9/16", sixteen 3/4" square by 1/2" thick wood pieces)
Other Versions of the Fifteen Puzzle, Continued

(cardboard box and 15 wood pieces, 4.2 x 4.2 x 5/8 inch;
this red version appears to have a second 6 instead of a 9,
same manufacturer and box size / style as the Time and Missionary Puzzles)
Other Versions of the Fifteen Puzzle, Continued

"The Combination Puzzling Puzzles", copyright Canada 1934.
(wood box, 15 wood pieces, 3.9 by 3.9 by 7/8 inches;
flip the puzzle over and the backs of the pieces have the letters GDOAETYNANALNI?,
? for piece 13 that has been replaced and had A hand written on the back)

Adams Co., unknown age.
(cardboard case and metal puzzle, 3.25 inches)

Copyright J. A. Storer
Other Versions of the Fifteen Puzzle, Continued - "Dukes Of Hazzard"

(plastic, 4.8 by 3.9 inches)

(plastic, 4.8 by 3.9 inches)

(plastic, 4.8 by 3.9 inches)

(plastic, 4.8 by 3.9 inches)

*Copyright J. A. Storer*
Other Versions of the Fifteen Puzzle, Continued

Superman, D C Comics 1978.
(plastic, 4.8 by 3.9 inches)

Batman, D C Comics 1978.
(plastic, 4.8 by 3.9 inches)

Spiderman, Marvel Comics 1978.
(plastic, 4.8 by 3.9 inches)

Incredible Hulk, Marvel Comics 1978.
(plastic, 4.8 by 3.9 inches)

Copyright J. A. Storer
Other Versions of the Fifteen Puzzle, Continued

(plastic, 4.8 by 3.9 inches)

Dig’Em Kellog Company’s 1979.
(plastic, 4.8 by 3.9 inches)

Toucan Sam, (c) Kellog Company 1979.
(plastic, 4.7 by 3.8 inches)

Popeye, King Features 1981.
(plastic, 4.8 by 3.9 inches)

Copyright J. A. Storer
Other Versions of the Fifteen Puzzle, Continued

Circa 1960's.
(brass, 3.25 inches)

Hungarian, circa 1950?
(metal, 2.75 inches)

The Monitor, Artist Series, Philips, no date.
(plastic, 3.5" x 2.9" x 1/4";
sticker on back shows solved position)

Alphabet, circa 1960's.
(plastic, 2.5 inches)

Marge & Homer Simpson, circa 2000.
(plastic, 2.5 inches)

(plastic, 2.5 inches)

Copyright J. A. Storer
Other Versions of the Fifteen Puzzle, Continued

101 Dalmatians, Disney, circa 1960's?
(plastic, 3.5 by 3 inches)

Donald Duck, Walt Disney Productions, circa 1960's?
(plastic, 2+5/8" x 2+5/8" x 3/16")

Copyright J. A. Storer
Other Versions of the Fifteen Puzzle, Continued

\[\text{Santa Claus, circa 2000?} \]
(plastic, 2+3/4" x 4.5" x 3/16")

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Further reading:
Slocum's Page: http://www.puzzleworld.org/PuzzleWorld/jerry_slocum.htm
Baxter's Page: http://www.johnrausch.com/SlidingBlockPuzzles
May Patent, from: www.uspto.gov - patent no. 50,608
McCleary Patent, from: www.uspto.gov - patent no. 284,037
Bradshaw Patent, from: www.uspto.gov - patent no. 427,392
Cook Patent, from: www.uspto.gov - patent no. 476,980
Anderson Patent, from: www.uspto.gov - patent no. 483,276
Johnson Patent, from: www.uspto.gov - patent no. 1,555,980
Fritz Patent, from: www.uspto.gov - patent no. 1,693,711
Nesis Patent, from: www.uspto.gov - patent no. 5,785,318

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