

# REPAIR FACILITY (SOLUTION)

by Celestine Lau

Solvers are presented with 4 sets of Across and 4 sets of Down clues, with the jagged borders suggesting that they should be paired and solved as diagramless crosswords.

Doing so produces 4 grids that are rotationally symmetrical:

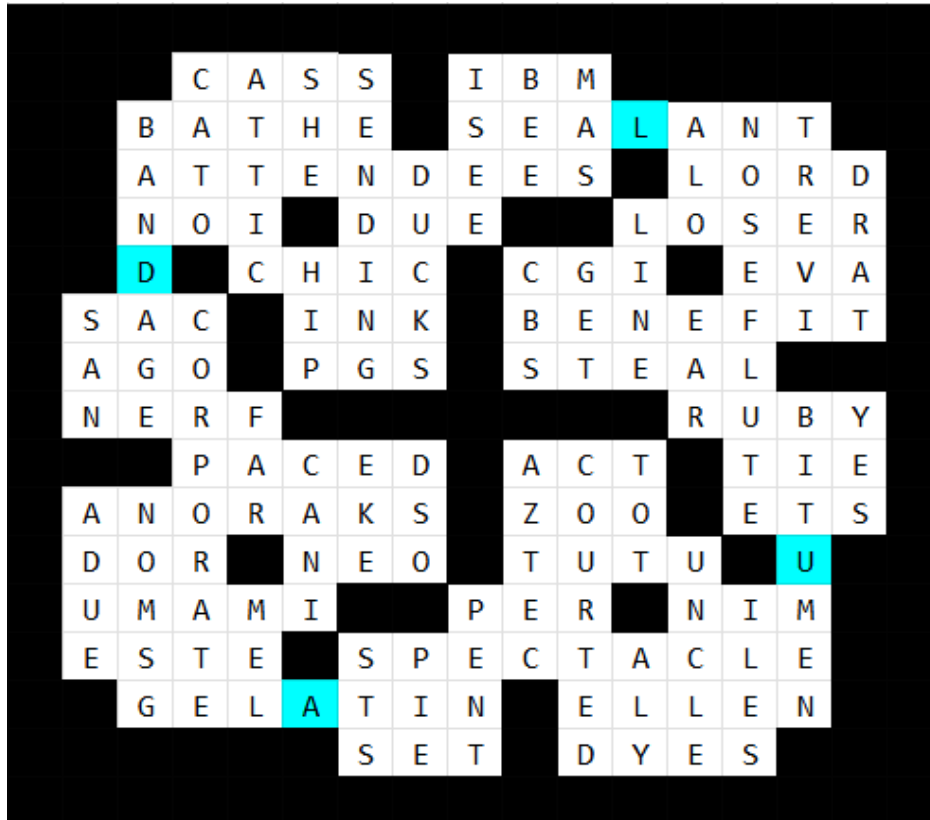
<p>Across clues starting with: 1. "Mama" of music ...</p>	<p>Down clues starting with: 1. The Censor of Ancient Rome ...</p>	
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<p>Across clues starting with: 1. Tiny worker ...</p>	<p>Down clues starting with: 1. Spanish phone greeting ...</p>	<p>A crossword puzzle grid with the following words filled in:</p> <ul style="list-style-type: none"> <li>ANT (Across 1)</li> <li>LORD (Across 2)</li> <li>LOSER (Across 3)</li> <li>CIGARETTA (Across 4)</li> <li>BENEFIT (Across 5)</li> <li>STEAL (Across 6)</li> <li>RUBY (Across 7)</li> <li>TIES (Across 8)</li> <li>ETS (Across 9)</li> </ul>
<p>Across clues starting with: 1. Anatomical pouch ...</p>	<p>Down clues starting with: 1. ___ Francisco ...</p>	<p>A crossword puzzle grid with the following words filled in:</p> <ul style="list-style-type: none"> <li>SAC (Across 1)</li> <li>AGO (Across 2)</li> <li>NERF (Across 3)</li> <li>PACED (Across 4)</li> <li>ANORAKS (Across 5)</li> <li>DORNEO (Across 6)</li> <li>UMAMI (Across 7)</li> <li>ESTE (Across 8)</li> <li>GEL (Across 9)</li> </ul>

<p>Across clues starting with: 1. Part of a play ...</p>	<p>Down clues starting with: 1. Historic Mexican empire ...</p>	
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The flavortext suggests that solvers should attempt to put these pieces back together in a way that fits in a 15x15 grid (with rotational symmetry, as crosswords typically have), but still keeping the 4 sub-grids unconnected. There is only one way to do so:

Next, solvers must find some materials to “repair” this grid. Look at the squares between the 4 sub-grids. In 4 of these squares, a letter can be inserted to create an item that could possibly be used to join things together. These 4 squares are also rotationally symmetrical with each other, preserving the overall rotational symmetry.



Finally, recall that each of the original sets of clues had a positive or negative number in parentheses that has not been used yet. Sum the numbers given with set of clues for the two halves of each of these words. For example, for BANDAGE, take the (+6) from the 4th set of Down clues that contain the clue for BAN, and the (+1) from the 1st set of Down clues that contain the clue for AGE, and apply the sum as a Caesar shift to the middle letter D, producing K. The shifted letters, in clockwise order starting from the top, give the final thematic answer **LINK**.

#### Constructor's Notes:

I didn't really like having the final Caesar shift step, but it was necessary as there were a limited set of words that were both “sticky” materials and could be formed from two shorter words (which had to be a minimum of 3 letters due to crossword conventions) stuck together by another letter. For what it's worth, the original letters produced were L, A, U and D so if the desired answer were DUAL or LAUD this would have worked nicely without the need for shifts.

Another 7 letter word that could work was ASP(H)ALT, but I didn't use it as it was too similar to BITUMEN.