

An automaton based on a true story

by Dominique Corbin

St. Denis, France • Photos by the author



o design and build an automaton, you need three things. First of all comes the general idea, obviously. Then you must make some decisions about the aesthetic part: the materials used and the style of the sculpture. Then, finally, you must invent the mechanism.

For a long time, I had in my notebook (where I record all of my ideas before forgetting them) a project consisting of a series

The author's unusual automaton depicts a friend of his changing out the motor in a Citroën 2CV.

AUTOMATA MAGAZINE



LA VRAIE VIE

Calherine change son moteur sur le houlenand Blanqui à Paris (time).

March • April 2020

of automata about the amusing and useful things that I could do in my youth, but which are now forbidden by social pressure. An example of this would be repairing my car in the street in front of my house; or even, in the case of a Citroën 2CV, to build a car by combining the elements of different wrecks—something guite impossible now in the streets of Paris! My friend and I used to call these experiences "la vraie vie" (real life). As my friend's birthday approached, I decided to offer her the first of this series (a series that I'm not at all sure will continue!).

My idea was to evoke the time when she was changing out the engine of her 2CV under the Blanqui Boulevard elevated metro in Paris. She did it well, and more than once (and so did I)!

I remembered that, when you tried to remove the engine from a 2CV, the car would rise on its super-flexible suspension, hindering the operation. Also, you generally had forgotten to disassemble something, so it was necessary to put the engine back in place in order to finish dismantling it. I wanted to put this in the movement—a nod to all those who have once repaired their 2CV on the side of the road!



1. A page from the author's notebook showing his original ideas for the automaton's mechanism.

Aesthetically, I hesitated between a three-dimensional automaton and a tableau (flat) automaton. Finally, after seeing works of art brut*, I decided to make a kind of diorama, which was another activity of my childhood that has completely disappeared but of which I have a good memory. These dioramas were made by cutting sheets of cardboard, so all of the characters and sets were two dimensional.

For the mechanism, I did not want to use a conventional cam system. I wanted to try to find something simpler (in appearance)—a sort of drawer in which I'd install "bumps" to operate the mechanism. I also wanted to use the most basic solutions possible, like those that an artist of the art-brut school might have achieved with limited means.

At first I thought about operating the drawer like a drawer, directly, but I realized that the movement would be much too violent. To slow the movement I thought of the system often used on old tube radios—a string stretched around a small shaft that could be turned. My first notes can be seen in **photo 1**. I used my trusty Meccano to

*Art brut: According to the Tate Museum, "Art brut is a French term that translates as "raw art." It was invented by the French artist Jean Dubuffet to describe art such as graffiti or naïve art, which is made outside the academic tradition of fine art."

AUTOMATA MAGAZINE

test this solution (**photo 2**) and I found that it took several turns of the string around the shaft to have sufficient grip.

I made a small-scale sketch of a Dinky Toys 2CV van to give me the proper proportions and dimensions (**photo 3**). The final piece is twice as large as this drawing. Once the dimensions were decided, I quickly made a full-scale mock up to help work out the movements I needed and determine the height of the base (**photo 4**).

I could then begin the final construction. In general, I draw as few plans as possible, preferring to just build, even if I'm wrong! The base is plywood and the drawer and the "bumps" are galvanized steel sheet, recovered from the case of an old PC. At the places where the string passed through the metal, I set grommets so that the string would not be cut (**photo 5**).

I reinforced the Meccano brackets of the crank with thick brass pieces, soldered with tin to prevent them from wearing out too quickly. The two control rods are just ordinary galvanized wire. I was forced to strengthen the largest one by doubling the wire and soldering the two together. One wire moves the engine and the car, while the other moves the



2. Meccano mock up of the drawer mechanism. The string wrapped around the crank axle moves the drawer from side to side.



4. A full-scale mock up was made to help determine the movements.

figure (**photo 6**).

The figure and various other elements are made of tinplate, cut with a jeweler's saw (or fretsaw) or shear, then soldered together. Copious use was made of stop collars made from the small brass elements found in terminal blocks, as described in the last issue of *AM*. To draw the car and its ers in the top of the base are actuated by the "bumps" in the sliding drawer below.

RIGHT: 6. Wire follow-



3. Using a Dinky Toys model for scale and proportion, the author drew the rest of to diorama.



5. The actual base with all of the mechanics in place.



AUTOMATA MAGAZINE

March • April 2020



7. Detail of the figure's mechanism. Arrows point to the treminal-block stop collars.

parts, in addition to my Dinky Toys model, I bought a detailed model of a Citroën 2CV, and I searched my memory.

The pivoting points of the figure are ordinary nails. Wires are held in place by the brass terminalblock stop collars. I thought at first that gravity would be enough to pull the figure's arms toward the engine. That did not work at all, so I had to complicate the mechanism (**photo 7**).

Finding a way to make the car rise was also not easy. Finally, I used a small piece of piano wire to connect the engine to the car. The finished mechanism can be



8. A back-side view of all of the components in place. The author used only basic materials and techniques, as might be used in the art brut style.



9. The watercolor sketch of the backdrop panel. This was transferred to the actual backdrop.

seen in photo 8.

The rest of the work involved decorating and painting. First, I took some pictures of the place where the car was actually repaired, which had not changed much in 45 years. For the background, I made a full-size watercolor of the place, which I then transferred to the background plate. Then I populated the scenery with vehicles that were important to us at the time, including my yellow Renault truck, the Renault 16 owned by my friend's parents, a Peugeot 404 Break, a Volkswagen, and a Gordini R8 that she also owned (photo 9). I used the internet to find information about, and photos of, these.

I painted the wooden elements with a matt, resistant acrylic, which I use for painting stage sets. I first covered all the wood surfaces with a layer of white. Then I sanded them and painted them with ordinary house paint if the result was not good enough. All of the tinplate elements are painted with Humbrol lacquer, always starting with a layer of white. Once the paint was dry, only wrapping the gift remained!

See La Vraie Vie in action here: https://youtu.be/rN1_bmsgl7M

AUTOMATA MAGAZINE

4

Back to Contents pg.