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THE TALK OF THE TOWN

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Inventions

CATCHING rats with T. Kell's ratcatcher (patented in 1838) required a high degree of determination on the part of the rats. A victim had to walk without suspicion into a rectangular wire enclosure and gnaw on a piece of bait while standing on a metal plate. By doing that, the rat tripped a counterweighted lever, closing a door behind itself and opening a door in front. After eating some—but not all—of the bait, the rat had to squeeze through the newly opened door and step on a second metal plate, causing the counterweighted lever to rock back to its original position. This closed the second door and opened the first, thus resetting the trap. Then, while a second rat entered the first door and began to gnaw at what was left of the bait, the first rat had to squeeze through both a metal gate and a fearsome-looking funnel-like opening made of lengths of sharpened wire, to emerge into a removable wire cage. There it remained, along with any succeeding victims, ready to bite the fingers of anyone who attempted to remove the cage.

We have never seen T. Kell's patented ratcatcher catch rats, but we did examine a model of it recently. The model was on display at the Cooper Union, as part of an exhibition called "A Better Mousetrap: Patents and the Process of Invention." The main part of the exhibition consisted of more than a hundred patent models dating from the nineteenth century. (Inventors submitted models with their patent applications until 1880, when the United States Patent Office, which had by then been in operation for ninety years, ran out of storage space.) Other parts of the exhibition included a time line depicting the history of patents, a series of displays having to do with various patent-related legal issues, and an inventors' hall of fame.

We began our tour in the hall of fame. The inventors enshrined there included Thomas Edison, George Washington Carver, Chester Carlson (the inventor of xerography), the Wright brothers, Peter Cooper (the founder of the Cooper Union, and the inventor of, among other things, a device for making powdered eggs), and Nikola Tesla. Tesla, whose inventions include many elements of the modern system of generating, transmitting, and using electric power, is our favorite inventor. He was born in 1856, in what is now Yugoslavia, and he emigrated to New York in 1884. He couldn't tolerate the sight of pearl earrings, the smell of camphor, the act of shaking hands, or close exposure to the hair of other people. He strongly favored numbers that were divisible by three. He seldom ate or drank anything without first calculating its volume. He counted his steps. He washed his hands compulsively. He never married, but he told a friend he had once loved a particular pigeon "as a man loves a woman." When he dined, alone, at Delmonico's or in the Palm Room of the Waldorf-Astoria, he ordered ahead by telephone, arrived at exactly eight, used eighteen linen napkins to wipe germs from the silver and crystal at his place, and left at exactly ten.

Studying the patent time line, which covered one wall of a long corridor, we concluded that all the easy inventions have already been invented. The cast-iron plow

"I'm sorry, Rhett, but now I don't give a damn."

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(1797), the washing machine (1827), the toothpaste tube (1841), the safety pin (1849)—any one of these relatively straightforward innovations might, under certain circumstances, have occurred to us. But the gyrocompass (1918), the cyclotron (1934), sulfa quinoxaline (1946), the integrated circuit (1961), a new kind of mouse (1988), and most other inventions of this century are way over our head. The Patent Office issues between seventy-five and a hundred thousand patents each year. It issues none of them to us.

In the main part of the exhibition, we paused first near a group of models that had a medical theme. We saw a hernia truss, a vacuum contraption that was supposed to suck diseases out of sick people, and quite a few aritificial limbs. Most of the artificial limbs dated from around the time of the Civil War. (According to an essay in the catalogue that accompanied the show, nearly half of Mississippi's 1866 budget was spent on prostheses.) There were also several arresting medical photographs, which had been included to give the viewer some idea of what inspired these devices; there was one of a pile of amputated legs, one of a roomful of cadavers, and two of a half-naked sailor who, a caption said, had been "wounded while fighting pirates."

Much of one wall was devoted to models of swings and other recreational equipment; according to the catalogue, "dozens and dozens" of swings were patented during the nineteenth century. Some of the swings appeared to have been conceived for the purpose of creating business for the inventors of artificial limbs. In one such device—patented by E. A. Tuttle in 1873—a small wooden seat was suspended above six large metal springs. As the swinger skimmed back and forth above them, the springs, which were stretched horizontally within a rectangular wooden frame, would have snapped like hungry crocodiles. Another recreational device, a sort of elaborate rocker, patented in 1872, was designed in such a way that any child riding in it would have been in danger of being ejected face first into the rocking mechanism.

At the other end of the room was a model of an apparatus called a pigeon starter. It had been created by Dr. Henry A. Rosenthal, a resident of Brooklyn, in 1875. The invention consisted of a wooden frame on which was mounted a figure resembling a small toy dog or woolly lamb. When a spring-loaded mechanism was activated, it thrust the figure forward in a way that Dr. Rosenthal believed to be highly upsetting to pigeons. The purpose of the invention was to make pigeons fly without hesitation from a cage in which they had been confined, so that they could be shot by sportsmen. Previously, Dr. Rosenthal wrote in his patent application, startling pigeons for this purpose had been notoriously difficult. Quite often, insufficiently startled pigeons would either remain in their cage or leave it on foot. "Neither of these troubles can happen when my improved starter is used," Dr. Rosenthal asserted.

The mousetraps that gave the show its name were just around the corner from the pigeon starter. One of the traps looked like a flour sifter. Two looked like cheese graters. One looked a great deal like the kind of mousetrap that most people buy nowadays, except that it had a small mirror mounted behind its bait holder. The mirror was meant to engender feelings of reckless competitiveness in any mouse that peered into it. When approaching mice see their own reflections, the trap's label explained, "they naturally think the other mouse is after the bait and do their best to get it themselves." It was this fact that gave the Mirror Trap Company the confidence to declare its product "THE QUICKEST AND SUREST TRAP ON EARTH"—a claim that was probably as true in the nineteenth century as it is today.