

THE ROMANCE OF AUTOMATA.

BY HENRY RIDGELY EVANS.

I.

AUTOMATA have played an important part in the magic of ancient temples, and in the seances of mediæval sorcerers. Who has not read of the famous "Brazen Head," constructed by Friar Bacon, and the wonderful machines of Albertus Magnus? Modern conjurers have introduced automata into their entertainments with great effect, as witness Pinetti's "Wise Little Turk," Kempelen's "Chess Player," Houdin's "Pastry Cook of the Palais Royal," Kellar's "Hindoo Clock," Maskelyne's "Psycho," etc. But these automata have been such in name only, the motive power usually being furnished by the conjurer's *alter ego*, or concealed assistant.

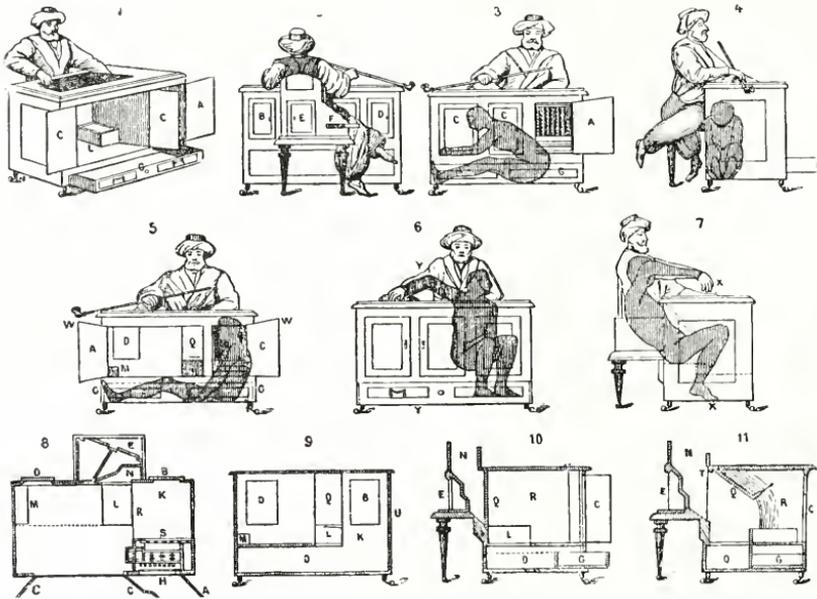
The so-called automaton Chess Player is enveloped with a halo of romance. It had a remarkable history. It was constructed in the year 1769 by the Baron von Kempelen, a Hungarian nobleman and mechanic, and exhibited by him at the leading courts of Europe. The Empress Maria Theresa of Austria played a game with it. In 1783 it was brought to Paris and shown at the Café de la Regence, the rendezvous of chess lovers and experts, after which it was taken to London. Kempelen died on the 26th of March, 1804, and his son sold the Chess Player to J. N. Maelzel, musician, inventor and mechanic, who was born at Ratisbon, Bavaria, in 1772. His father was a celebrated organ-builder.

Maelzel was the inventor of the Metronome (1815), a piece of mechanism known to all instructors of music; the Automaton *Trumpeter* (1808), and the *Pan-Harmonicum* (1805). He had a strange career as the exhibitor of the Chess Player. After showing the automaton in various cities of Europe, Maelzel sold it to Napoleon's step-son, Eugène Beauharnais, the Viceroy of the Kingdom of Italy. But the old love of "adventurous travel with the Turbaned Turk" took possession of him, and he succeeded in buy-

ing back the Chess Player from its royal owner. He went to Paris with it in 1817 and 1818, afterwards to London, meeting everywhere with success. In 1826 he brought it to America. The Chess Player excited the greatest interest throughout the United States. Noted chess experts did their best to defeat it, but rarely succeeded.

Now for a description of the automaton.

The audience was introduced into a large room, at one end of which hung crimson curtains. These curtains being drawn aside, Maelzel rolled forward a box on castors. Behind the box or table, which was two feet and a half high, three feet and a half long, and two feet wide, was seated cross-legged, the figure of a Turk



THE AUTOMATON CHESS PLAYER.

The chair on which the figure was affixed was permanently attached to the box. At the top of the box was a chessboard. The figure had its eyes fixed intently upon this board. The right hand and arm of the Turk was extended towards the board, the left, which was somewhat raised, held a long pipe.

Four doors, two in the front, and two in the rear of the box were opened, and a lighted candle thrust into the cavities. Nothing was to be seen except cog wheels, levers, and intricate machinery. A long drawer, which contained the chessmen and a cushion, was pulled out. Two doors in the Turk's body were thrown open, and

the candle held inside, to satisfy the spectators that nothing but machinery was contained therein.

Maelzel wound up the automaton with a large key, took away the pipe, and placed the cushion under the arm of the figure. Curious to relate the automaton played with its left hand. In Von Kempelin's day, the person selected to play with the figure, sat at the same chess-board with it, but Malzel altered this. A rope separated the machine from the audience, and the player sat at a small table, provided with a chess-board, some ten or twelve feet away from the Turk.

The automaton invariably chose the white chess-men, and made the first move, its fingers opening as the hand was extended towards the board, and the piece picked up and removed to its proper square.

When his antagonist had made his move, the automaton paused and appeared to study the game, before proceeding further. It nodded its head to indicate check to the king. If a false move was made by its opponent, it rapped on the table, and replaced the piece, claiming the move for itself. Maelzel, acting for the human player, repeated his move on the chess-board of the Turk, and when the latter moved, made the corresponding move on the board of the challenger. The whirring of machinery was heard during the progress of the game, but this was simply a blind. It subserved two purposes: *first*, to induce the spectators to believe that the automaton was really operated by ingenious mechanism, *second*, to disguise the noise made by the concealed confederate as he shifted himself from one compartment to the other, as the various doors were opened and shut in succession. No machine could possibly be constructed to imitate the human mind when engaged in playing chess, or any other mental operation where the indeterminate enters and which requires knowledge and reflection. But the majority of people who saw the automaton did not realize this fact, and pronounced it a *pure machine*.

Signor Blitz, the conjurer, who was intimate with Maelzel having frequently given entertainments in conjunction with him, was possessed of the secret of the Turk. In his memoirs, he says: "The Chess Player was ingeniously constructed—a perfect counterpart of a magician's trick-table, with a variety of partitions and doors, which, while they removed every possible appearance of deception, only produced greater mystery, and provided more security to the invisible player. The drawers and closets were so arranged as to enable him to change his position according to circum-

stances: at one moment he would be in this compartment; the next in that; then in the body of the Turk."

He says this concealed assistant was named Schlumberger.

This explanation is verified by Professor Allen,* who was very intimate with Maelzel.

William Schlumberger was a native of Alsace, a remarkable chess expert and linguist. Maelzel picked him up in the Café de la Regence, Paris, where he eked out a meagre living as a teacher of chess.

Occasionally, Schlumberger would over-indulge in wine, and as a result would be beaten, while acting as the motive power of the Turk. "On one occasion," says Professor Allen, "just as Maelzel was bringing the Turk out from behind the curtain, a strange noise was heard to proceed from his interior organization, something between a rattle, a cough, and a sneeze. Maelzel pushed back his ally in evident alarm, but presently brought him forward again, and went on with the exhibition as if nothing had happened."

Schlumberger not only acted as confederate, but served his employer as secretary and clerk.

Edgar Allen Poe, who wrote an exposé of the automaton when it visited Richmond, remarked: "There is a man, Schlumberger, who attends him (Maelzel) wherever he goes, but who has no ostensible occupation other than that of assisting in packing and unpacking of the automaton. Whether he professes to play chess or not, we are not informed. It is quite certain, however, that he is never to be seen during the exhibition of the Chess Player, although frequently visible just before and after the exhibition. Moreover, some years ago Maelzel visited Richmond with his automaton. Schlumberger was suddenly taken ill, and during his illness there was no exhibition of the Chess Player. These facts are well known to many of our citizens. The reason assigned for the suspension of the Chess Players' performances was *not* the illness of *Schlumberger*. The inferences from all this we leave, without further comment, to the reader."

Edgar Allen Poe, the apostle of mystery, certainly hit the nail on the head here, and solved the problem of the automaton.

The Chess Player had the honor of defeating Napoleon the Great—"the Victor in a hundred battles." This was in the year 1809, when Maelzel, by virtue of his office as Mechanician to the Court of Austria, was occupying some portion of the Palace of

* Fiske's *Book of the First American Chess Congress*, New York, 1859. Pp. 420-484.

Schönbrunn, "when Napoleon chose to make the same building his headquarters during the Wagram campaign." A man by the name of Allgaier was the concealed assistant on this occasion. Napoleon was better versed in the art of manœuvring human kings, queens, prelates and pawns on the great chess-boards of diplomacy and battle than moving ivory chessmen on a painted table-top.

Maelzel, in addition to the Chess Player, exhibited his own inventions, which were really automatons, also the famous panorama, "The Burning of Moscow." After a splendid tour throughout the States, he went to Havana, Cuba, where poor Schlumberger died of yellow fever. On the return trip Maelzel himself died, and was buried at sea. This was in 1838.

The famous Turk, with other of Maelzel's effects, was sold at public auction in Philadelphia. The automaton was bought by Dr. J. K. Mitchell, reconstructed, and privately exhibited by him for the amusement of his friends. Finally it was deposited in the Chinese Museum, where it remained for fourteen years, with the dust accumulating upon it. Here the Chess Player rested from his labors, a superannuated, broken down pensioner, dreaming, if automatons can dream, of his past adventures, until the year 1854. On July 5 of that year a great fire destroyed the Museum, and the Turbaned Turk was burnt to ashes. Better such a fate than rotting to pieces in the cellar of some old warehouse, forgotten and abandoned.

Robert-Houdin, in his autobiography, tells a most romantic story about the Chess Player, the accuracy of which has been seriously doubted. He also makes several errors concerning its career and that of Maelzel. R. Shelton Mackenzie, who translated Houdin's life (1859), calls attention to these mistakes, in his preface to that work. "This remarkable piece of mechanism was constructed in 1769, and not in 1796; it was the Empress Maria-Theresa of Austria who played with it, and not Catherine II of Russia. M. Maelzel's death was in 1838, on the voyage from Cuba to the United States, and not, as M. Houdin says, on his return to France; and the automaton, so far from being taken back to France, was sold at auction here [Philadelphia], where it was consumed in the great fire of July 5, 1854."

I believe that the true history of the Chess Player is related by Prof. George Allen, of the University of Pennsylvania (Fiske's "Book of the First American Chess Congress," N. Y., 1859, pp. 420-484), from which I have mainly drawn my account.

II.

Now for Houdin's entertaining story of the Chess Player. In the year 1796, a revolt broke out in a half-Russian, half-Polish regiment stationed at Riga, capital of Livonia, Russia. At the head of the rebels was an officer named Worousky, a man of talent and energy. He was of short stature, but well built. The revolutionists were defeated in a pitched battle and put to flight by the Russians. Worousky had both thighs shattered by a cannon ball and fell on the battle field. However, he escaped from the general massacre of his comrades by casting himself into a ditch near a hedge, not far from the house of a doctor named Osloff. At nightfall he dragged himself with great difficulty to the house, and was taken in by the benevolent physician, who promised to conceal him. Osloff eventually had to amputate both of Worousky's legs, close to the body. The operation was successful. During this time, the famous Baron von Kempelen came to Russia, and paid Dr. Osloff a visit. He also took compassion upon the crippled Polish officer. It seems that Worousky was a master of the game of chess, and repeatedly defeated Osloff and Kempelen. Kempelen then conceived the idea of the automaton chess player, as a means of assisting Worousky to escape from Russia, and immediately set about building it. It was completed in June, 1796. In order to avert suspicion Osloff and Kempelen determined to play at several of the smaller towns and cities before reaching the frontier.

The first performance was given at Toula. Says Houdin: "I possess a copy of the original bill, which was given me by M. Hessler, nephew of Dr. Osloff, who also supplied me with all these details. Worousky won every game he played at Toula, and the papers were full of praises of the automaton. Assured of success by the brilliancy of their debut, M. de Kempelen and his companion proceeded towards the frontier."

Worousky was concealed from sight, while traveling, in the enormous chest which held the Chess Player. Air holes were made in the sides of the chest to enable him to breathe. They arrived without adventure at Vitebsk, on the road to the Prussian frontier, when a letter came summoning them to the imperial palace at St. Petersburg. The Empress Catherine II, having heard of the automaton's wonderful talent, desired to play a game with it. They dared not refuse this demand. Worousky, who had a price set on his head, was the coolest of the three, and seemed delighted at the idea of playing with the Empress. After fifteen days travel

they reached St. Petersburg. Kempelen had the automaton carried to the palace in the same chest in which it traveled, thereby secretly conveying Worousky thither. The Chess Player was set up in the library, and at the appointed hour Catherine II, followed by a numerous suite, entered and took her place at the chess-board. The members of the Court took their places behind the Empress. Kempelen never allowed anyone to pass behind the automaton, and would not consent to begin the game till all the spectators were in front of the board.

"The chest and the Turk's body were then examined, and when all were perfectly convinced they contained nothing but clockwork, the game began. It proceeded for some time in perfect silence, but Catherine's frowning brow speedily revealed that the automaton was not very gallant towards her, and fully deserved the reputation it had gained. The skillful Mussulman captured a bishop and a knight, and the game was turning much to the disadvantage of the lady, when the Turk, suddenly forgetting his dignified gravity, gave a violent blow on his cushion, and pushed back a piece his adversary had just moved.

"Catherine II. had attempted to cheat; perhaps to try the skill of the automaton, or for some other reason. At any rate the haughty empress, unwilling to confess her weakness, replaced the piece on the same square, and regarded the automaton with an air of imperious authority. The result was most unexpected—the Turk upset all the pieces with a blow of his hand, and immediately the clock work, which had been heard during the whole game, stopped. It seemed as if the machinery had got out of repair. Pale and trembling, M. de Kempelen, recognizing in this Worousky's impetuous temper, awaited the issue of this conflict between the insurgent and his sovereign.

"'Ah, ah! my good automaton! your manners are rather rough,' the Empress said, good humoredly, not sorry to see a game she had small chance of winning end thus. 'Oh! you are a famous player, I grant; but you were afraid of losing the game, and so prudently upset the pieces. Well, I am now quite convinced of your skill and your violent character.'

"M. de Kempelen began to breathe again, and regaining courage, tried to remove the unfavorable impression which the little respect shown by the automaton must have produced. Hence he said, humbly,

"'Will your majesty allow me to offer an explanation of what has just happened?'

“‘By no means, M. de Kempelen,’ Catherine said, heartily,—‘by no means; on the contrary, I find it most amusing, and your automaton pleases me so much that I wish to purchase it. I shall thus always have near me a player, somewhat quick perhaps, but yet able to hold his own. You can leave it here tonight, and come to-morrow morning to arrange the price.’

“There is strong reason to believe that Catherine wished to commit an indiscretion when she evinced a desire that the figure should remain at the palace till next morning. Fortunately, the skillful mechanic managed to baffle her feminine curiosity by carrying Worosky off in the big chest. The automaton remained in the library, but the player was no longer there.

“The next day Catherine renewed her proposition to purchase the chess-player, but Kempelen made her understand that, as the figure could not perform without him, he could not possibly sell it. The empress allowed the justice of these arguments; and, while complimenting the mechanic on his invention, made him a handsome present.

“Three months after the automaton was in England, under the management of Mr. Anthon, to whom Kempelen had sold it. I know not if Worosky was still attached to it, but I fancy so, owing to the immense success the Chess Player met with. Mr. Anthon visited the whole of Europe, always meeting with the same success; but, at his death, the celebrated automaton was purchased by Maelzel, who embarked with it for New York. It was then, probably, Worosky took leave of his hospitable Turk, for the automaton was not nearly so successful in America. After exhibiting his mechanical trumpeter and Chess Player for some time, Maelzel set out again for France, but died on the passage, of an attack of indigestion. His heirs sold his apparatus, and thus Cronier obtained his precious relic.”

III.

The Chess Player and Pepper’s Ghost Show were two magical experiments that caused the greatest amount of discussion and newspaper effusions in their time. At the solicitation of a leading theatrical manager of Paris, Houdin arranged the two tricks for a melodrama, in which Catherine II of Russia was one of the characters.

The automaton Whist Player, “Psycho,” was the invention of John Nevil Maskelyne, a descendant of Nevil Maskelyne, the English astronomer. “Psycho” far exceeds the Chess Player in ingenious construction, and its secret has never been divulged. Says

the *Encyclopedia Britannica*: "In 1875 Maskelyne and Cooke produced at the Egyptian Hall, in London, an automaton whist player, 'Psycho,' which from the manner in which it is placed upon the stage, appears to be perfectly isolated from any mechanical communication from without The arm has all the complicated movements necessary for chess or draught playing; and 'Psycho' calculates any sum up to a total of 99,000,000. . . . 'Psycho', an Oriental figure, sitting cross-legged on a box, is supported by a single large cylinder of clear glass, which as originally exhibited, stood upon the carpet of the stage, but was afterwards set loose upon a small stool, having solid wood feet; moreover, this automaton may be placed in almost any number of different ways. It may be mentioned that in the same year in which 'Psycho' appeared, the joint inventors patented a method of controlling the speed of clock-work mechanism by compressed air or gas stored in the pedestal of an automaton, this compressed air acting upon a piston in a cylinder and also upon a rotating fan when a valve is opened by 'an electrical or other connection worked by the foot of the performer or an assistant.' But it is not known whether the principle obscurely described in the specification was applicable in any way to the invisible agency employed in 'Psycho,' or whether it had reference to some other invention which has never been realized."

Maskelyne was born in Cheltenham, England, and like Houdin was apprenticed to a watch-maker. He went on the stage and made a great hit by exposing the frauds of the Davenport Bros., spirit-mediums. He is the proprietor of Egyptian Hall, London, a little theater devoted to legerdemain and illusions.

One of Maskelyne's best mechanical tricks is the "Spirit Music-Box," an exposé of which I am indebted to Mr. Henry V. A. Parsell, of New York City, archivist of the Society of American Magicians, himself a magician, and a lover of the art of magic. The construction of this novel piece of apparatus will afford a clue to many alleged mediumistic performances. Professor Parsons, of Hartford, Conn., is the owner of the box, reproduced in the illustration. Says Mr. Parsell:

"A sheet of plate glass is exhibited freely to the audience and proved to contain no electric wires or mechanism. This glass plate is then suspended horizontally in the center of the stage by four cords hooked to its corners. An ordinary looking music-box is then brought in by the assistant. It is opened, so that the audience can see the usual mechanism within. The music-box is now placed on the glass plate and the performer comes down among the specta-

tors. Notwithstanding the isolation of the box the command of the performer suffices to cause it to play, or cease, in obedience to his will. It matters not in what part of the room the conjurer goes—his word is enough to make silence or harmony issue from the box, always beginning where it left off and never skipping a note. The simple cause of this marvelous effect lies in the mechanism of the box and in its mode of suspension.

"A small music box of this kind is shown in Fig. 3. The box is seen with its mechanism removed and resting upon it. In addition to the usual cylinder, comb and wheel-work, there is a device for starting and stopping the box when it is tilted slightly endwise. This consists of a light shaft delicately pivoted and carrying at one

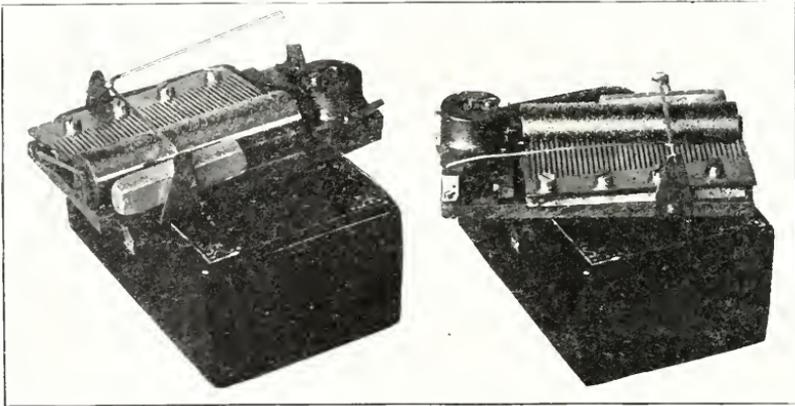


Fig. 3.

Fig. 4.

THE SPIRIT MUSIC BOX.

end a lead weight (seen just in front of the cylinder), and at the other end an arm of light wire whose far end is bent down so as to engage the fly of the wheel-work. In Fig. 3 the mechanism is tilted so that the wire arm is raised; the fly is now free to revolve and the box plays.

"A front view of the mechanism is shown in Fig. 4. Here the arm is down, arresting the motion of the fly and producing silence. When the box is resting on the glass plate an assistant behind the scenes causes the plate to tilt slightly up or down by raising or lowering the cords which support one end. The mechanism of the box is so delicately adjusted that an imperceptible motion of the plate is sufficient to control its playing."