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The first number, which appeared in September, 1903, contains contributions from such world-famous Buddhist scholars and sympathisers as Sir Edwin Arnold, Dr. Giuseppe de Lorenzo, Prof. Rhys Davids, and Dr. Karl E. Neumann, together with articles by noted native Oriental savants.

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THE ENLIGHTENED ONE.
BY EDUARD BIEDERMANN.

Frontispiece to The Open Court.
GHOST-MAKING EXTRAORDINARY.

BY HENRY RIGGELY EVANS.

I.

THE French Revolution drew crowds of adventurers to Paris, their brains buzzing with the wildest schemes—political, social, and scientific—which they endeavored to exploit. Among the inventors was a Belgian optician, Etienne-Gaspard Robertson, born at Liège, in 1763, where for many years he had been a professor of physics. He addressed a memorial to the Government proposing to construct gigantic burning glasses a la Archimedes, to set fire to the English fleets, at that period blockading the French seaports. A commission composed of Monge, Lefevre, Gineau and Guyton de Morveau was appointed to investigate the matter, but nothing came of it.

Failing to accomplish his scheme, Robertson turned his attention to other methods of money-making. Having a decided penchant for magic illusions, etc., he set about constructing a ghost-making apparatus. The "Red Terror" was over, Robespierre dead, and people began to pluck up courage and seek amusements. Rid to a great extent, of his rival, La Guillotine—the most famous of "ghost-making machines"—Robertson set up his phantasmagoria at the Pavillon de l'Echiquier, and flooded the city with circulars describing his exhibition. Poultier, a journalist and one of the Representatives of the People, wrote an amusing account of the entertainment in the L'Ami des Lois, 1798. He says:

"A decemvir of the Republic has said that the dead return no more, but go to Robertson's exhibition and you will soon be convinced of the contrary, for you will see the dead returning to life in crowds. Robertson calls forth phantoms, and commands legions
of spectres. In a well-lighted apartment in the Pavilion l'Echiquier I found myself seated a few evenings since, with sixty or seventy people. At seven o'clock a pale, thin man entered the room where we were sitting, and having extinguished the candles he said: 'Citizens, I am not one of those adventurers and impudent swindlers who promise more than they can perform. I have assured the public in the Journal de Paris that I can bring the dead to life, and I shall do so. Those of the company who desire to see the apparitions of those who were dear to them, but who have passed away from this life by sickness or otherwise, have only to speak, and I shall obey their commands.' There was a moment's silence, and a haggard-looking man, with dishevelled hair and sorrowful eyes, rose in the midst of the assemblage and exclaimed, 'As I have been unable in an official journal to re-establish the worship of Marat, I should at least be glad to see his shadow.' Robertson immediately threw upon a brazier containing lighted coals, two glasses of blood, a bottle of vitrol, a few drops of aquafortis, and two numbers of the Journal des Hommes Libres, and there instantly appeared in the midst of the smoke caused by the burning of these substances, a hideous livid phantom armed with a dagger and wearing a red cap of liberty. The man at whose wish the phantom had been evoked seemed to recognize Marat, and rushed forward to embrace the vision, but the ghost made a frightful grimace and disappeared. A young man next asked to see the phantom of a young lady whom
he had tenderly loved, and whose portrait he showed to the worker of all these marvels. Robertson threw upon the brazier a few sparrow's feathers, a grain or two of phosphorus, and a dozen butterflies. A beautiful woman with her bosom uncovered and her hair floating about her, soon appeared, and smiled on the young man with most tender regard and sorrow. A grave looking individual sitting close by me suddenly exclaimed, 'Heavens! it's my wife come to life again,' and he rushed from the room, apparently fearing that what he saw was not a phantom."

One evening one of the audience avowing himself to be a Royalist, called for the shade of the martyred king, Louis XVI. Here was a dilemma for citizen Robertson. Had he complied with the request and evoked the royal ghost, prison and possibly the guillotine would have been his fate.

But the magician was foxy. He suspected a trap, on the part of a police agent in disguise, who had a spite against him. He replied as follows: "Citizens I once had a recipe for bringing dead kings to life, but that was before the 18th Fructidor, when the Republic declared royalty abolished forever. On that glorious day I lost my magic formula, and fear that I shall never recover it again."
In spite of Robertson's clever retort, the affair created such a sensation that the following day, the police prohibited the exhibitions, and placed seals on the optician's boxes and papers. However, the ban was soon lifted, and the performances allowed to continue. Lucky Robertson! The advertisement filled his coffers to overflowing. People struggled to gain admission to the wonderful phantasmagoria.

Finding the Pavilion too small to accommodate the crowds, he magician moved his show to an abandoned chapel of the Capuchin Convent, near the place Vendome. This ancient place of worship was located in the middle of a vast cloister crowded with tombs and funeral tablets.

A more gruesome spot could not have been selected. The Chapel was draped in black. From the ceiling was suspended a sepulchral lamp, in which alcohol and salt were burned, giving forth a ghastly light which made the faces of the spectators resemble those of corpses. Robertson, habited in black, made his appearance, and harangued his audience on ghosts, witches, sorcery, and magic. Finally the lamp was extinguished and the apartment plunged in Plutonian darkness. A storm of wind and rain, thunder and lightning, interspersed with the tolling of a church bell, fol-

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EXPLANATION OF ROBERTSON'S GHOST-ILLUSION.
lowed, and after this the solemn strains of a far-off organ were heard. At the evocation of the conjurer, phantoms of Voltaire, Mirabeau, Jean-Jacques Rousseau, Robespierre, Danton, and Marat appeared and faded away again "into thin air." The ghost of Robespierre was shown rising from a tomb. A flash of lightning, vivid and terrible, would strike the phantom, whereupon it would sink down into the ground and vanish.

People were often carried away fainting from the exhibition. It was truly awe inspiring and perfect in mise-en-scène.

At the conclusion of the seance, Robertson used to remark: "I have shown you, citizens, every species of phantom, and there is but one more truly terrible spectre—the fate which is reserved for us all. Behold!" In an instant there stood in the centre of the room a skeleton armed with a scythe. It grew to a colossal height and gradually faded away.

Sir David Brewster, in his work on natural magic, has the following to say on concave mirrors and the art of phantasmagoria. "Concave mirrors are distinguished by their property of forming in front of them, and in the air, inverted images of erect objects, or erect images of inverted objects, placed at some distance beyond their principal focus. If a fine transparent cloud of blue smoke is raised, by means of a chafing dish, around the focus of a large concave mirror, the image of any highly illuminated object will be depicted in the middle of it, with great beauty. A skull concealed from the observer is sometimes used to surprise the ignorant; and when a dish of fruit has been depicted in a similar manner, a spectator, stretching out his hand to seize it, is met with the image of a drawn dagger, which has been quickly substituted for the fruit at the other conjugate focus of the mirror."

Thoroughly conversant with the science of optics, it is more than probable that Robertson made use of large concave mirrors in his exhibition, or else a species of phantasmagoric magic lantern, rolling upon a small track. Pushing this contrivance backwards and forwards caused the images to lessen or increase, to recede or advance.

Robertson realized quite a snug fortune out of his ghost exhibition and other inventions. His automaton speaking figure, called le Phonorganon, uttered two hundred words of the French language. Another interesting piece of mechanism was his Trumpeter. These two machines formed part of a beautiful Cabinet de Physique in his house, the Hotel d'Yorck, Boulevard Montmartre, No. 12, Paris. He has left some entertaining memoirs, entitled
Memoires recreatifs et anecdotifs (1830-1834), copies of which are exceedingly rare. He was a great aeronaut and invented the parachute which has been wrongly attributed to Garnerin.

Robertson, as Commandant des Aerostiers, served in the French army, and rendered valuable service with his balloons in observing the movements of the enemy in the campaigns in Belgium and Holland, under General Jourdain. In the year 1804 he wrote a treatise on ballooning, entitled, La Minerve, vaisseau Aerien destiné aux dé couvertes, et propose, a toutes les Academies de l'Europe, published at Vienna. He died at Batignolles (Paris) in 1837.

In his memoirs, Robertson describes a species of optical toy called the Phantoscope, for producing illusions on a small scale. This may give a clue to his spectres of the Capuchin Convent. He also offers an explanation of Nostradamus' famous feat of conjuring up the likeness of Francis I in a magic mirror, for the edification of the beautiful Marie de Medici.

II

We now come to the greatest of all ghost-shows, that of the Polytechnic Institute, London. In the year 1863 letters patent were granted to Professor John Henry-Pepper, professor of chemistry in the London Polytechnic Institute, and Henry Dircks, civil engineer, for a device "for projecting images of living persons in the air." Here were no concave mirrors, no magic lanterns, simply a large sheet of unsilvered glass. The effect is founded on a well-known optical illusion. "In the evening carry a lighted candle to the window and you will see reflected in the pane, not only the image of the candle, but that of your hand and face as well. A sheet of glass, inclined at a certain angle, is placed on a stage between the actors and spectators. Beneath the stage and just in front of the glass, is a person robed in a white shroud, and illuminated by the brilliant rays of the electric or the oxy-hydrogen light. The image of the actor who plays the part of spectre, being reflected by the glass, becomes visible to the spectators, and stands, apparently, just as far behind the glass as its prototype is placed in front of it. This image is only visible to the audience. The actor who is on the stage sees nothing of it, and in order that he may not strike at random in his attacks on the spectre, it is necessary to mark beforehand on the boards the particular spot at which, to the eyes of the audience the phantom will appear. Care must be taken to have the theatre darkened and the stage very dimly lighted."

This ghost-making apparatus has been used with splendid suc-
cess in the dramatization of Dickens' "Christmas Carol," "Haunted Man," and Alexander Dumas' "Corsican Brothers," etc. The French conjurer, Robin, created a great sensation in Paris with it Professor Pepper, in endeavoring to patent the apparatus in France found himself forestalled. Some years before, "a little toy had been brought out and patented in France, by which a minature ghost could be shown. It consisted of a box with a small sheet of glass placed at an angle of forty-five degrees, and it reflected a concealed table, with plastic figures, the spectre of which appeared behind the glass, and which young people who possessed the toy invited their companions to take out of the box, when it melted away, as it were, in their hands and disappeared. In France at that time all improvements on a patent fell to the original patentee." (The True History of the Ghost, Etc., by Prof. Pepper. London. 1820.)

At the Polytechnic Institute the ghost was admirably produced. The stage represented the room of a mediaeval student who was engaged in burning the midnight oil. Looking up from his black-letter tome he beheld the apparition of a skeleton. Resenting the intrusion he arose from his chair, seized a sword which was ready to his hand, and aimed a blow at the figure, which vanished, only to return again and again.

The assistant who manipulated the spectre wore a cover of black velvet. He held the real skeleton in his arms and made the fleshless bones assume the most grotesque attitudes. He had evidently studied Holbein's "Dance of Death." The lower part of the skeleton, from the pelvis downward, was dressed in white linen, presumably a shroud. To the audience the figure appeared to vanish and appear through the floor.

Pepper eventually brought out a new illusion called "Metempsychosis," the joint invention of himself and a Mr. Walker. It is a very startling optical effect, and is thus described by me in my American edition of Stanyon's Magic: "One of the cleverest illusions performed with the aid of mirrors is that known as the 'Blue Room,' which has been exhibited in this country by Kellar. It was patented in the United States by the inventors. The object of the apparatus is to render an actor, or some inanimate thing, such as a chair, table, suit of armor, etc., visible or invisible at will. 'It is also designed,' says the specification in the patent office, 'to substitute for an object in sight of the audience the image of another similar object hidden from direct vision without the audience being aware that any such substitution has been made. For this purpose employ a large mirror—either an ordinary mirror or for some pur-
poses, by preference, a large sheet of plate-glass—which is transparent at one end and more and more densely silvered in passing from this toward the other end. Mount this mirror or plate so that it can, at pleasure, be placed diagonally across the stage or platform. As it advances, the glass obscures the view of the actor or object in front of which it passes, and substitutes the reflection of an object in front of the glass, but suitably concealed from the direct view of the audience.

"When the two objects or sets of objects thus successively pre-

FIG. 1. APPARATUS.
DIAGRAM OF BLUE ROOM.

FIG. 2. ARMOUR SCENE.

sented to the view are properly placed and sufficiently alike, the audience will be unaware that any change has been made. In some cases, in place of a single sheet of glass, two or more sheets may be employed."

By consulting Fig. 1, the reader will understand the construction of the illusion, one of the best in the repertoire of the conjurer. The shaded drawing in the left upper part, represents a portion of the mirror, designed to show its graduated opacity.

"a is a stage. It may be in a lecture-room or theater. "bb are
the seats for the audience in front of the stage. $c$ is a small room—eight or ten feet square and eight high will often be sufficiently large: but it may be of any size. It may advantageously be raised and approached by two or three steps from the stage $a$.

"$d$ is a vertical mirror, passing diagonally across the chamber $c$ and dividing it into two parts, which are exact counterparts the one of the other. The mirror $d$ is so mounted that it can be rapidly and noiselessly moved diagonally across the chamber in the path represented by the dotted line $d^1$, and be withdrawn whenever desired. This can conveniently be done by running it in guides and upon rollers to and from a position where it is hidden by a screen, $e$, which limits the view of the audience in this direction.

"In consequence of the exact correspondence of the two parts of the chamber $c$, that in front and that behind the mirror, the audience will observe no change in appearance when the mirror is passed across.

"The front of the chamber is partially closed at $cr$ by a shield or short partition-wall, either permanently or whenever required. This is done in order to hide from direct view any object which may be at or about the position $c^1$.

"The illusions may be performed in various ways—as, for example, an object may, in the sight of the audience, be passed from the stage to the position $c^2$, near the rear short wall or counterpart shield $f$, diagonally opposite to and corresponding with the front corner shield $cr$, and there be changed for some other. This is done by providing beforehand a dummy at $c^1$, closely resembling the object at $c^2$. Then when the object is in its place, the mirror is passed across without causing any apparent change. The object, when hidden, is changed for another object externally resembling the first, the mirror is withdrawn, and the audience may then be shown in any convenient way that the object now before them differs from that which their eyesight would lead them to suppose it to be.

"We prefer, in many cases, not to use an ordinary mirror, $d$ but one of graduated opacity. This may be produced by removing the silvering from the glass in lines; or, if the glass be silvered by chemical deposition, causing the silver to be deposited upon it in lines, somewhat as represented in Fig. 1. Near one side of the glass the lines are made fine and open, and progressively in passing toward the other side they become bolder and closer until a completely-silvered surface is reached. Other means for obtaining a graduated opacity and reflecting power may be resorted to.

"By passing such a graduated mirror between the object at $c^2$
and the audience, the object may be made to fade from the sight, or gradually to resolve itself into another form.”

Hopkins in his fine work on “Magic, stage illusions, etc.” thus describes one of the many effects which can be produced by the Blue Room apparatus. The curtain rises, showing “the stage set as an artist’s studio. Through the centre of the rear drop scene is seen a small chamber in which is a suit of armor standing upright. The floor of this apartment is raised above the level of the stage and is approached by a short flight of steps. When the curtain is raised a servant makes his appearance and begins to dust and clean the apartments. He finally comes to the suit of armor, taking it apart, cleans and dusts it, and finally reunites it. No sooner is the suit of armor perfectly articulated than the soulless mailed figure deals the servant a blow. The domestic, with a cry of fear, drops his duster, flies down the steps into the large room, the suit of armor pursuing him, wrestling with him, and kicking him all over the stage. When the suit of armor considers that it has punished the servant sufficiently, it returns to its original position in the small chamber, just as the master of the house enters, brought there by the noise and cries of the servant, from whom he demands an explanation of the commotion. Upon being told, he derides the servant’s fear, and, to prove that he was mistaken, takes the suit of armor apart, throwing it piece by piece upon the floor.”

It is needless, perhaps, to explain that the suit of armor which becomes endowed with life has a man inside of it. When the curtain rises a suit of armor is seen in the Blue Room, at H, (Fig. 2). At I is a second suit of armor, concealed behind the proscenium. It is the duplicate of the visible one. When the mirror G is shoved diagonally across the room, the armor at H becomes invisible, but the mirror reflects the armor concealed at I, making it appear to the spectators that the suit at H is still in position. An actor dressed in armor now enters behind the mirror, removes the suit of armor at H, and assumes its place. When the mirror is again withdrawn, the armor at H becomes endowed with life. Again the mirror is shoved across the apartment, and the actor replaces the original suit of armor at H. It is this latter suit which the master of the house takes to pieces and casts upon the floor, in order to quiet the fears of the servant. This most ingenious apparatus is capable of many novel effects. Those who have witnessed Professor Kel- lar’s performance will bear witness to the statement. When the illusion was first produced in England a sketch for it was written by the famous Burnd, editor of Punch.