MAGIE LUMINEUSE

A BOOK REVIEW BY WILLEM TEBRA

The title may be translated as 'Luminous magic from shadow theatre to the magic lantern'. It can suggest various things.

In fact the book starts with substantial information about the magic lantern; only 82 pages are about the shades. Both subjects are interesting, but in our society we are more attracted to the former.

Jac Remise has been inspired in writing this book. In France he is a well known toy expert, he collects many toys in his house in Paris and he knows much about their history. On French television some years ago he amazed the viewers with his love for toys.

His wife Pascale has taken the photographs and I guess that Regis van de Walle, besides being a collector of mechanical toys, has had something to do with the writing. They have produced a fine book, written in an elegant style and reasonably documented, containing a lot of interesting photographs and prints after engravings of great artists.

One can say that the text follows the general line of other French publications about the origins of the cinema. It reflects more of a toy- and theatre-kinship than a technical or scientific background; however, this touch makes the reading pleasant.

Besides the magic lantern a lot of other subjects are brought to one's attention, such as projection screens, diaramas, peepholes, thaumatropes and other optical toys.

An important topic, in my opinion, is treated in the chapters on lantern-slides; among other things a story is told about the discovery of a catalogue of the famous slide painter Mr Desch.

Another valuable ingredient of the book is the 'vues d'optique' and other prints related in one way or another to the presentation of the magic lantern. Some of them are really beautiful and carry the rich flavour of a bygone richness from the magic lantern period.

Before I dive into the separate chapters, I must say something about the connection of the magic lantern with the shadow theatre. In the first place it is the light source. The high level of performance in those theatres, for instance the famous theatre 'Chat Noir' of Rodolf Salis in Paris, during the years 1886-1896, is unthinkable if such a thing as a controllable limelight with an appropriate projector had not existed. In a more general way also the style of the projection is much alike, but the pictures of the slides are opaque instead of transparent.

To me it seems that in the 19th century the history of the magic lantern and that of the shades intersect each other, therefore the separate description of both is interesting and gives food for speculation.

The history before 1600, rendered in the first chapters, as I see it, is a mediaevel grey. About the first lantern there is nothing more than a hazy notion. Most of our readers know some details in books and articles, in which a more or less acceptable story of the camera obscura is made out with Al Hazen, Giovanni Della Porta and Leonardo Da Vinci as the dramatis personae. Not until ca. 1640 is there a more continuous development; then Father Athanasius Kircher writes in his works something about necromancy. In his 'Ars magna lucis et umbrae' he pointed at the Dane Thomas Walgens (Walgenstein), who with his magic lantern made fun for the Italian princesses and the public of Rome. He also described a microscope consisting of a tube with two lenses. This construction is much like a magic lantern with a parabolic mirror and was capable of making a gruesome picture of a flea on the wall.

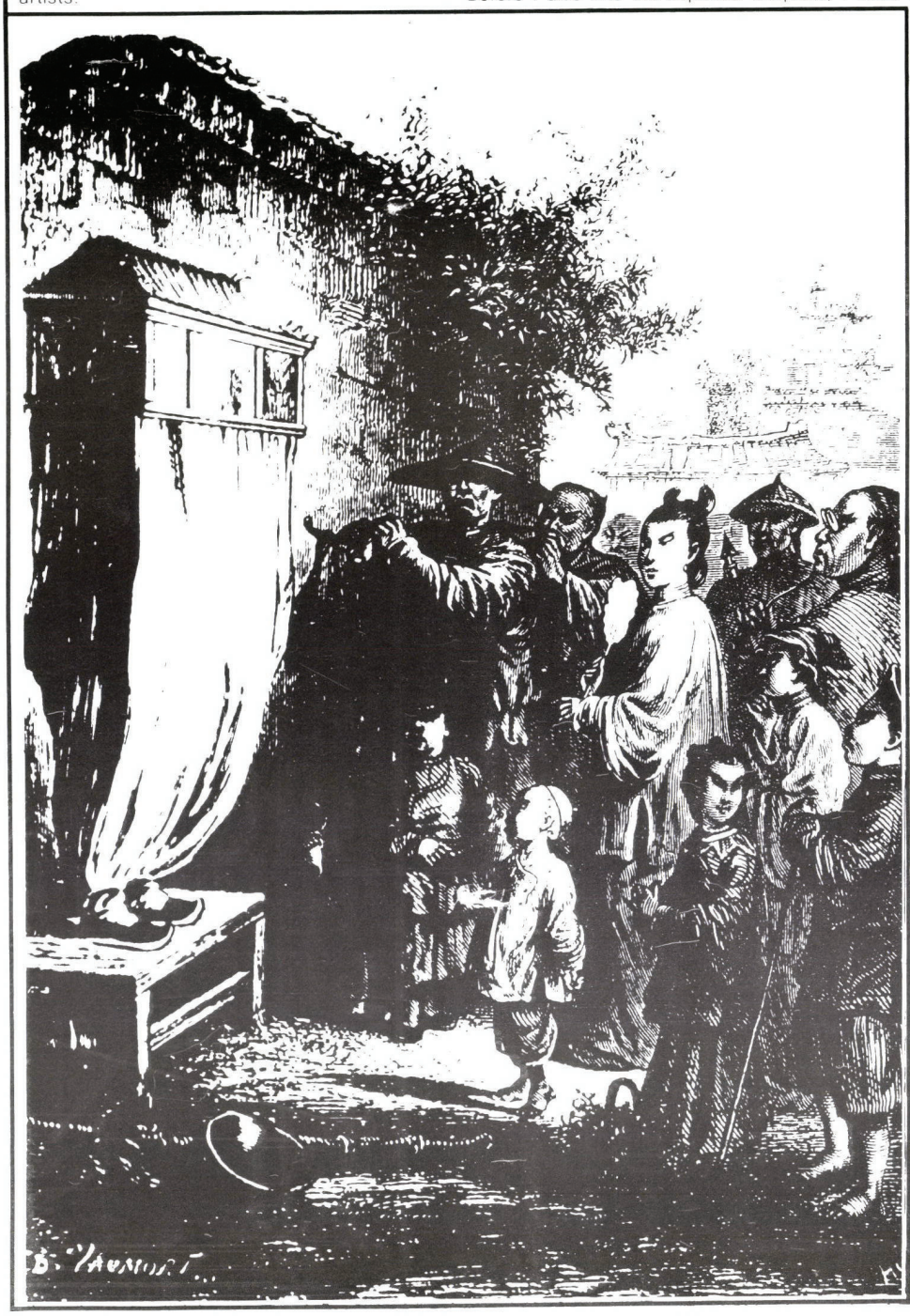
I have omitted to remark on the important role that Christian Huygens played by improving Walgenstein's lantern. Next in this discontinuous history plot is Abbé Nollet who in his 'Lecon de physique expérimentale', dated 1743, reported on the microscope of Lieberkühn, a magic lantern in which the sun is the light source.

An improvement of the Lieberkühn microscope by Cuff and Adams also benefitted the magic lantern. Next the idea of Doctor Joh. Zahn is described 1702, who had converted the oblong glass slide into a glass disc with 5 or 6 pictures on it. Why he did so is left a question. Nollet is further quoted with a description of mechanical animation slides; one of the figures represents a windmill, the hands of which can be turned by a handle. This early mechanical slide is due to Pieter van Musschenbroek.

The first chapters are more technical than the others because of the quotations from old books. I think a serious drawback in this part of the book is the fact that some of the drawings mentioned from the old books are not reproduced.

Page 40 of Magie Lumineuse holds a full size picture of Robertson's biunial. Robertson (from Belgium) brought the old technique of the fantasmagory to the public of Paris in a rather blood-chilling way (1797). According to the book it was his idea to project the picture behind a semi-transparent screen, so that source and action were invisible to the public. He gave his performance an esoteric touch and was very clever in hiding his tricks from the audience. The fantasmagory (Greek: fantasma = spirit; agoreuein = to speak in public) was already known in the antique world. Robertson applied it to the magic lantern; he therefore built a lantern according to Van Eslin with an Argand burner, Dolland lenses and a lamphouse of Molteni.

The cat's eye mechanism added to the lens, which was used to control the light by the smooth overflow between the dissolving view pictures, is described in some detail. Under the carriage of



the lantern were four wheels to move it towards or away from the screen, because this movement created the illusion of depth and motion. The slides for fantasmagory are often recognised by the black surrounding the picture.

On page 92 the light source is discussed. Most people do not realise that before 1900 complete darkness at night was common, so that a simple candle was enough for a magic lantern performance. The first lamp for this purpose (Kircher) used vegetable oil and the light was yellow-orange. After adding some camphor (100 gr/ltr) the flame became whiter.

In 1792 Argand improved the oil lamp with a cylindrical wick for a better air mix. A year later Quinquet modified the cylindrical glass tube by an elegant bulge at the height of the flame.

In 1804 Drummond discovered limelight, in 1844 the electric arc appeared and Bunsen and Roscoe put forward the magnesium light.

But in 1865 the paraffin lamp was successfully introduced. The light was considerably whiter and more intense than the light of the vegetable oil. In many circumstances the paraffin lamp was preferred to the more difficult to handle high intensity burners. The electric arc had a blue colour and gave a sort of moonlight effect. However, the oscillation of the arc and the accompanying light variations did not please the observers. Also the magnesium flame had its disadvantages with the smoke and continuously changing flame position. In fact limelight was the best, but expensive. Remarkably, gaslight in this text is completely neglected, only a print of a magic lantern with an Auerburner being shown.

However, on page 98 I find an often neglected subject; attention is given to different sorts of projecting screens. Pages 120-148 present the lantern slides. I think the glass-plates speak their own spiritual language and tell us something about a lost world. The fantasy of the artist is as remarkable as the way in which the figures are worked out. Although a certain number of manufacturers of plates are known, the artists of the slides remain mostly unknown.

In France, Desch was rediscovered by accident when his catalogue was found in the trash of a garage. This Parisan, who lived at the end of the 19th century, in addition to the normal long slides designed mechanical trick slides. The number of his slides is impressive and quite a few photographs of his plates are given. Desch made the paint himself; Prussian and Antwerp blue were his favourite colours, which admirably well interpreted the impression of night in some of his slides. A typical property of his paint, a mixing of copal with a little blue was for correcting the yellow light to the oil lamps.

The end of the 19th century showed a peak in the popularity of the magic lantern. In France the local product had serious competition from the German manufacturers. The hand-painted slides were expensive and the production small. In 1902 Lapièrre took a German transfer process for decalcomany plates and started with chromo-lithographic prints in transparent colours.

The glass carrier was prepared with Spanish varnish, after which the plates were mounted with a wet sponge. To make the plates more transparent they were varnished with a solution of nitrocellulose in petrol.

With the rapid fabrication of sets they became widely available. Lapièrre used green paper for the rims, while the Germans used red and pink paper.

The great hours of the magic lantern

Industrialisation comes in at page 60 of the book. In this chapter much interesting information for collectors can be found. There is a reason given for the manufacturing of magic lanterns on a large scale since at the beginning of the 19th century the number of performances with the magic lantern had slowed down.

In 1830 the lanternist walked the streets with the lantern on his shoulders, playing on a hand-organ crying: 'Magic lantern, interesting spectacle, magic lantern!'

Some years later these lanternists disappeared as a result of expanding industries creating full employment. Therefore many citizens had difficulties in engaging a lanternist for an evenings entertainment.

In France the story circulated that the Normandic tinsmith August Lapièrre therefore made himself a magic lantern to entertain his children. It consisted of a lamphouse of tin, containing a concave mirror in front of which a small oil lamp or candle was placed. A thick convex half condensor was placed before the slides and a simple lens completed the lantern. In 1843 he also made them for this friends and next for some toy merchants.

These first lanterns were intended for children and because of the low price, many of them were sold in France. After the war of 1870 the Frenchman Carette, a representative of a German toy maker, copied a number of Lapièrre's magic lanterns and took them into production. In 1875 Eduard Lapièrre, August's eldest son, improved the tubular model by attaching some small feet and gave the lanterns an attractive colour. The artist Bocquerau did the painting!

Further they developed a model for experienced amateurs; also the intervention of Lumière led to the creation of a phenakistiscope disc for projection.

At 1902 they introduced the decalcomany pictures on glass and so did away completely with the travelling lanternist.

Before industrialisation the magic lantern was made of wood or iron sheet, the light source was weak and the lens simple. The pictures on the wall were generally not clear and therefore it was a custom for professionals to use large slides for their shows. With the paraffin oil burners, this inconvenience was greatly reduced; however, because of the intense heat development the wood was replaced by iron sheets. Also in the second half of the 19th century there were better lenses because of the increasing demand for improved photographic results.

So far, the optical part of the magic lantern kept pace with the scientific advances. At the end of the 19th century the objective consisted of two

lenses, convex and concave, made of flint and crown glass, with a focal distance of about 9 or 12 cm.

Most likely it is the brothers Langenheim in Philadelphia who in 1848 developed photographic techniques suitable for projection. Soon after the introduction of the process in Europe plates of 85x100 mm with a passe-partout of 75x80 mm were used. Sometimes the plates were decorated with paint, coloured varnish or aniline.

The photographic process makes possible many effects. At the beginning of the 20th century the catalogues offered all kinds of subjects: travelling, childrens stories, the temperance life, the fables of Fontaine, science, etc.

Also a couple of mechanical slide systems are described in this book. In general the movements are simple. In the case of a chromatrope one turns a glass disc around with a handle, but in the more complicated contraptions there are sometimes more than three pieces of glass controlled by shift operations.

There are a number of fine examples given; besides photographs of slides of French origin there is also a plate of Millikin & Co. (London) of a (female) trapeze worker.

The colour photographs of magic lanterns and slides lend another attraction to the book; the illustration of other devices such as the phenakistiscope, kaleidoscope, traumotrope and other optical toys gives the reader a wider scope in the field.

Numerous photographs of various magic lanterns show how they have given way to the style of the Molteni lantern.

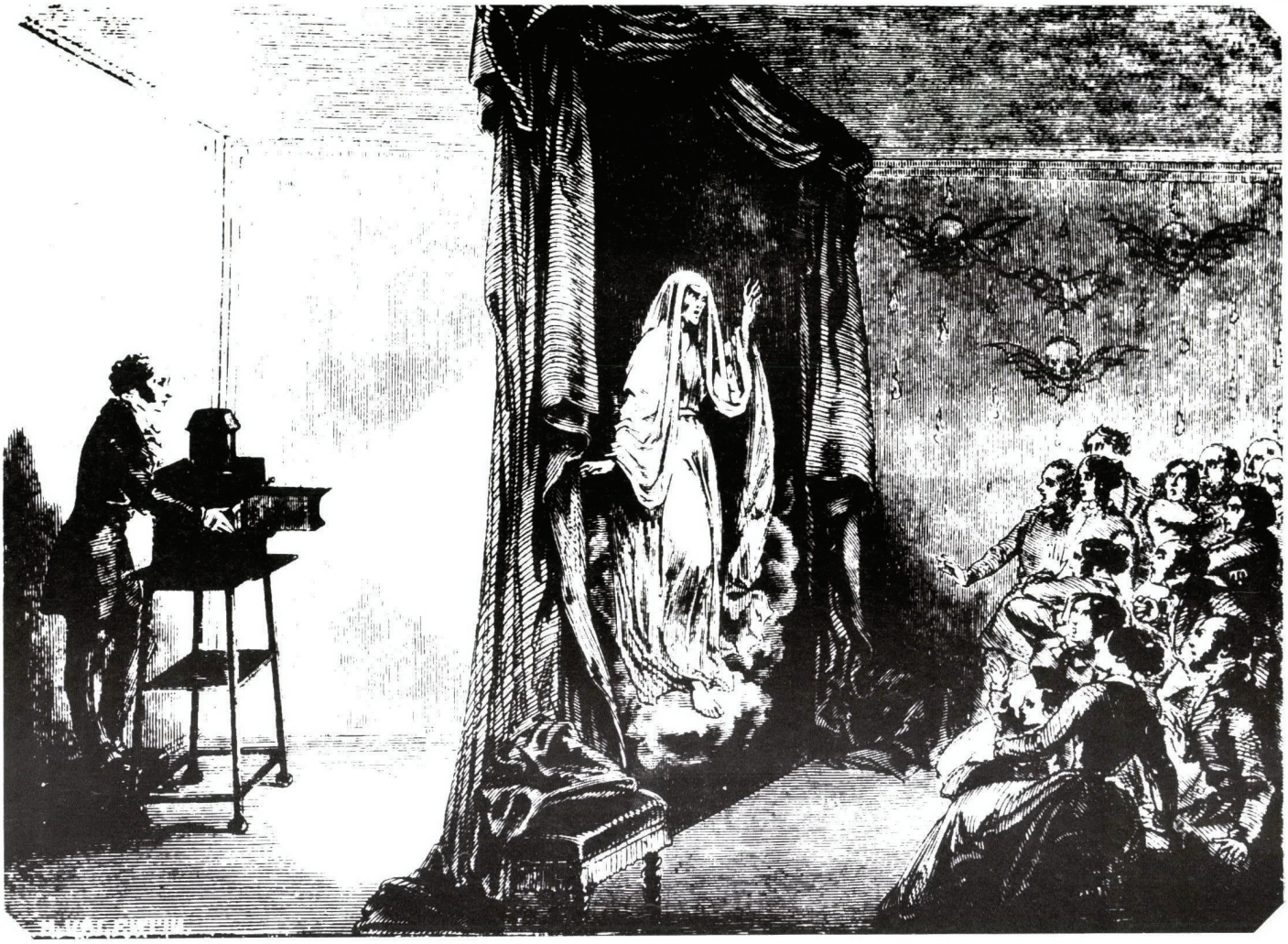
The rectangular and semi-tubular lanterns with the closed battlement around the lamphouse, the broad cylindrical lens tube and the four feet are typical. The funnel with a wavy roof which bears a big ring is another sign.

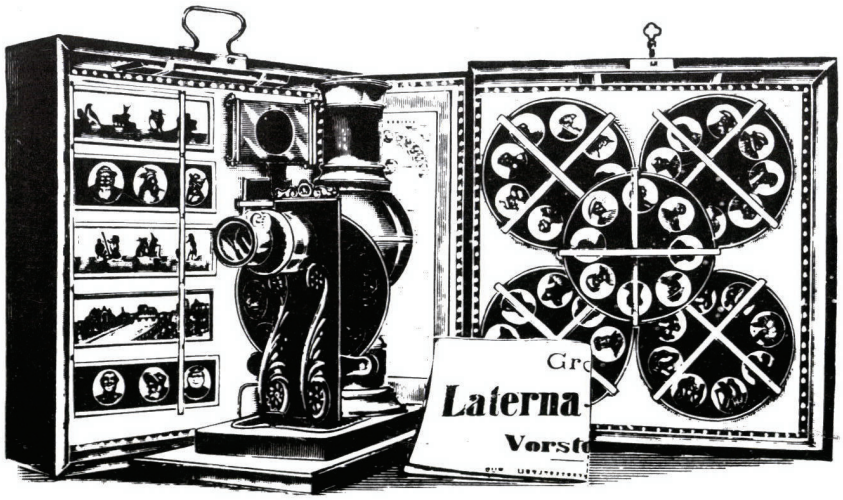
The firm of Molteni, founded in 1782, specialised in optical, physical, marine and mathematical instruments. In an engraving of J. Doulle (1757) after J. B. M. Pierre the artist already gives us a look at a magic lantern with such a funnel and wavy roof. Regarding the many pictures after famous engravers or painters, I think it is a pity that the editors while showing the prints of P. Freeman, F. Grenier, P. Bosio, G. Huet, Degard and J. F. Schenau, to mention some of them, have omitted those names and other particulars. This information could be helpful in dating.

I would like to mention the very interesting print of E. Vaumont after an engraving of Huyot, showing a shadow performer in the streets of an Asiatic town at the end of the 19th century.

To end this review, I must say that the book has been my friend for many hours.

Amsterdam, February '81 W. Tebra





'La Magie Lumineuse du théatre d'ombres à la lanterne magique'.
by Jac Remise, Pascale Remise and Regis van de Walle.

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David Henry, 36 Meon Road, London W3 8AN.