

NUREMBERG

MAGIC LANTERN PRODUCTION

HAUKE LANGE-FUCHS

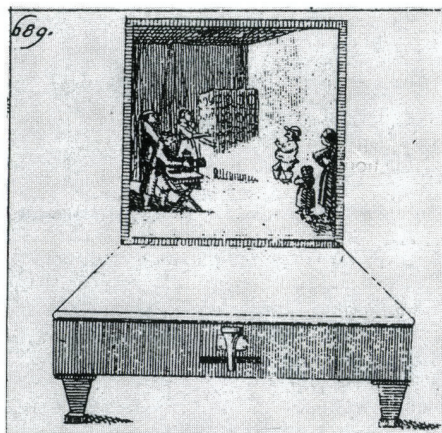
Roberta Basano's article on toy lantern production in Germany, and particularly in Nuremberg ('The Magic Lantern as a toy', in *The New Magic Lantern Journal*, Volume 8, No. 1, November 1996, p. 8), is the first survey of this overlooked field of research known to me; and I would like to add something more to the meagre information currently available on the subject.

Basano is correct in saying that Nuremberg was 'the world centre of toy manufacture' throughout the 19th century and during the first two decades of the 20th, and that toy lanterns manufactured in Nuremberg 'monopolised the European and North American markets for a considerable period of time' at the turn of the century.

She concentrates on this period, and exclusively on the firms of Georges Carette, Bing Brothers, Ernst Plank and Johann Falk; but since the history of lantern production in Nuremberg can be traced back to earlier centuries, with many more manufacturers than these, it may be interesting to look further at the historical background of Nuremberg's predominant position, and to put Carette, Bing, Plank and Falk in the context of their contemporary competitors.

As early as medieval times Nuremberg established itself as a centre of toy manufacturing known throughout the then 'Holy Roman Empire of German Nation'. An old proverb affirmed that 'Nürnberger Tand / geht durchs ganze Land' (Nuremberg toys travel every land) and the Nuremberg toy makers maintained their strong position in many countries for several centuries. It should be noted that the earliest Nuremberg 'toys' (Tand) were not designed only for children. In former times, the word designated a much larger variety of playthings and artistic and useful objects. Nuremberg was known not only for its puppet makers (from the end of the 13th century¹), but also for its tinsmiths and clockmakers: about 1510, a Nuremberg mechanic, Peter Henlein, invented the first portable clock, later known as the 'Nürnberger Ei' (the Nuremberg egg); and about 1545, the locksmith Kaspar Wernher constructed a toy ship with mechanically moving figures.²

Given this background, it is not surprising that the earliest record of the magic lantern in Germany should be traced in Nuremberg. Our first account of a presentation of the magic lantern in Germany³ concerns the experiments of Professor Sturm of the nearby university of Altdorf, in 1672; and at about this time a Nuremberg optician, Franziscus Griendel, was already manufacturing magic lanterns.⁴ Though little else is known about this 'obscure little connoisseur' of magic lanterns⁵ (whose name is also recorded as J Franziscus Gründel von Ach), the beginnings of the magic lantern manufacturing industry in Nuremberg can be dated to him.⁶ Griendel produced lanterns of various sizes, evidently for sale.



A Nuremberg toy. The picture painted on the virtual screen depicts a lantern show. A mechanism in the box revolves a disc placed behind the image, so that different pictures appear in turn in the aperture representing the projection screen.

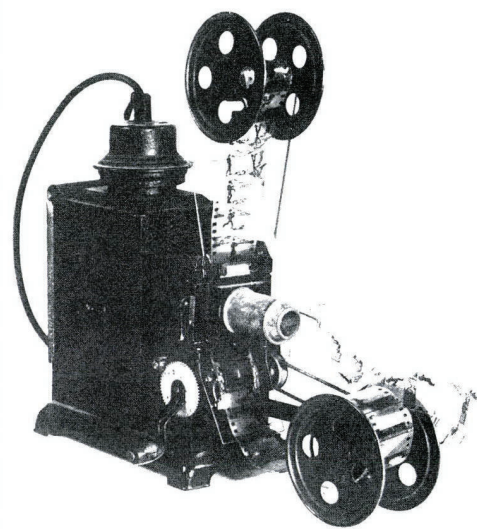
The optician Griendel was followed by the tinsmiths of Nuremberg, who were entitled, by a decree of 15 December 1681, to manufacture toy tinware.⁷ Before the end of the 17th century, as we know from a contemporary author, Christoff Weigel, writing in 1698,⁸ the Nuremberg tinsmiths took up the production of 'optische Kunst- und Bilderlaternen' (optical lanterns for arts and pictures). We may assume that the magic lantern manufacturing industry in Nuremberg continued and flourished during the succeeding decades, encouraged particularly by the invention in the 18th century of the process of pressing tin plate. Certainly it would be worthwhile for future researchers to take a closer look at this period, though the next notice of magic lanterns from Nuremberg so far discovered dates from a whole century later.

In 1803, the Nuremberg-based wholesaler **Georg Hieronimus Bestelmeier**, who issued illustrated catalogues of toys (from 1793, titled *Magazin*), published a large new volume of his *Magazin von verschiedenen Kunst- und andern nützlichen Sachen* (Catalogue of various artistic and other useful things). This voluminous work (an invaluable source for later researchers) illustrated among other items a magic lantern. Surprisingly, it is not, as one might expect, a toy lantern, but a sophisticated device for daylight projection, described as a 'mechanical magic lantern'. The price was relatively high at '4fl 30kr' (4½ guilders).⁹ The manufacturer of this rare instrument is not identified, but it is reasonable to assume that it was made in Nuremberg. Subsequent Bestelmeier catalogues offered an increasing variety of toy lanterns.¹⁰

The number of toy manufacturers in Nuremberg increased notably in this vital period. From the middle of the century we have exact figures: in 1851, out of a total of 195 toy manufacturers, 17 were registered as makers of 'artistic and mechanical toys', and two further firms were described as specialising in tin toys.¹¹ Their production ranged from magic lanterns to model trains and theatres, musical instruments, and many other items.¹² The catalogue of the Great Exhibition of 1851 at the Crystal Palace in London says that Nuremberg was then known all over the world for its export of toys.¹³ The period saw the start of industrialisation in Bavaria – a process unfortunately so far inadequately researched. Even so, we know the names and some of the products of a few manufacturers from this early period of industrialisation.

In 1862, the Nuremberg manufacturers **I Müller and L Neussner** took part in the International Exhibition in London, exhibiting among other goods magic lanterns, for which they received an award. This London award, however, is the only remaining evidence of their lantern production, and so far we have no knowledge of whether it encouraged Müller and Neussner to continue manufacturing magic lanterns. What happened to them? I have been unable to discover any trace of their production, and none of their lanterns seems to have survived. The question remains for future research.

Nevertheless, it was at this time that Nuremberg began to establish itself as a centre of lantern



A late, electrified Nuremberg-made toy projector

NOTES

- 1 Theodor Niebuhr: *Entwicklung und Bedeutung der Nürnberg-Fürth & Spielwarenindustrie*, Deutsche Zeitschrift für Wirtschaftskunde, vol. 4, 1–39, p. 172). The first known document naming puppet-makers (Dockenmacher) dates from 1413 (Peter Ertel: *Blechspielzeug*, Transpress, Berlin, 1991, p. 10).
- 2 Niebuhr, op. cit., p. 175, referring to Lochner: *Des Johann Neudorfer Nachrichten von Künstlern und Werkleuten aus dem Jahre 1547*, Vienna, 1875.
- 3 Joh. Christoph Sturm: *Collegium experimentale sive curiosum*, Nuremberg, 1676, p. 163.
- 4 J Christoph Kohlhans: *Neu-erfundene mathematische und optische Curiositäten*, Leipzig,

1677, p. 318; Joh. Gabriel Doppelmayr: *Historische Nachricht von den Nürnbergischen Mathematicis und Künstlern*, Nuremberg, 1730, p. 111.

- 5 M V Rohr: 'Zur früheren Entwicklungsgeschichte der Zauberalternen', in: *Zeitschrift der Deutschen Gesellschaft für Mechanik und Optik*, 1919, p. 51.
- 6 Franz Paul Liesegang: *Dates and Sources*, Magic Lantern Society, London, 1986, p. 12 (referring to '250 Jahre Nürnberger Laterna magica-Industrie' by the same author, in *Deutsche Optischewochenschrift*, 1923, vol. 9, p. 2).
- 7 Niebuhr, op. cit., p. 175.
- 8 Christoff Weigel: *Künstler und Handwerker*, Regensburg, 1698, pp. 217, 218. Weigel, besides being active as a publisher, was also a copperplate

engraver and instrument maker.

- 9 Georg Hieronimus Bestelmeier: *Magazin von verschiedenen Kunst- und andern nützlichen Sachen*, Nuremberg, 1803, no. 689.
- 10 Hermann Hecht: *Pre-Cinema History*, London, 1993 (no. 128) refers to the 1823 edition of the Bestelmeier catalogue.
- 11 Friedrich Mayer: *Nürnberg's Handel und Industrie*, Nuremberg, 1851, pp. 285ff.
- 12 Kieser: *Beiträge zur Gewerbestatistik Bayerns*, Munich, 1867, pp. 23ff.
- 13 cf. David Pressland: *Pressland's Blechspielzeuge der Welt*, AS-verlag, Zurich, 1995, p. 14. For magic lantern entries in the 1851 catalogue see Hermann Hecht, op. cit. (nos. 204B, 204B/1).

production.¹⁴ In about 1860, an unidentified 'KH' manufactured a 'Verbesserte Laterna Magica' (improved magic lantern) which is now in the Deutsches Filmmuseum, Frankfurt;¹⁵ and in my own collection are two early toy lanterns¹⁶ stamped with the trademark 'FN/N' which might well indicate a Nuremberg manufacturer. From later years we know the names of numerous manufacturers, among them Bender David of the nearby Fürth; Hans Eberl, Nürnberg; Leonhard Müller, Nürnberg,¹⁷ Leo Prager, Nürnberg and J F Roose, Nürnberg.¹⁸ Little has remained from the production of these minor companies, and their activity before the turn of the century is still obscure.¹⁹ But the climate was favourable for the foundation of a firm which was to become the predominant lantern manufacturer of the late 19th century and the beginning of the 20th.

In 1863, the brothers **Ignaz and Adolf Bing** started the business which was eventually to win worldwide fame under the trademark GBN (Gebrüder Bing, Nürnberg). The date of the official foundation of the company is still disputed.²⁰ The

young Ignaz Bing (1839–1918), who had worked as a traveller in tin goods and so was well aware of the market, was apparently the motivating force behind the undertaking. The Bing brothers started out as retailers of tin goods for kitchen and household use, and it was not until the late 1870s that they turned to producing and marketing their own manufactured tin goods under the style of Nürnberger Metallwarenfabrik Gebrüder Bing O/H.²¹ In 1879, the Bing brothers set up a factory in Nuremberg (Köhnstrasse 34²²), where they started out on the production of tin toys. The business expanded rapidly; the number of workers rose from 60 in 1881 to 200 in 1882, and production of toys began to overtake kitchenware.

Bing's first tin toys were equipment for dolls' kitchens (appropriately to their original production of full-scale household tinware). Production expanded to such other toys, more favoured by boys, as steam engines, model trains – and magic lanterns. The Bing brothers made their spectacular debut as manufacturers of toys at the Bavarian Trades Exhibition of 1882, where theirs was the largest toy manufacturer's stand. The date of birth of the first

Bing lantern is still undiscovered, and so far as we know, it was not until 1886 that the Bing company started to advertise their magic lanterns.²³

The expansion of the Bing enterprise continued, though differences arose between Ignaz and Adolf in 1883, leading to a modification of their partnership.²⁴ The company moved from Köhnstrasse to larger premises in Blumenstrasse, and a new factory was set up at Stephanstrasse in the 1890s.²⁵ By that time, several hundred workers were employed. In 1892, the Bing company was among the few German firms participating in the Columbia World Fair in Chicago, and in 1895 it was incorporated as a joint-stock company under the style of Nürnberger Metall und Lackierwarenfabrik, vorm Gebrüder Bing AG (chairman Ignaz Bing). The change of name apparently was unfortunate, and in 1901 the joint-stock company was again renamed, Gebrüder Bing AG. The continuing expansion resulted in the establishment of a new factory for the manufacture of enamelled toys at Grünheim in Saxony in 1897.²⁶ By 1900 the company employed 1,500 workers.²⁷

The Bing catalogue of 1898, published in German,

Nürnberger
Metall & Lackierwarenfabrik
 vorm. **Gebrüder Bing** Act. Ges.
NÜRNBERG

Specialität: Mechanische & Optische Spielwaaren
 Modell-Dampfmaschinen. Laterna Magica.
 Eisenbahnen mit Uhrwerk

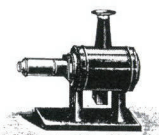
*Spécialité: Articles d'Optique et de Mécanique.
 Petites Machines à Vapeur. Lanternes Magiques.
 Chemins de Fer Mécaniques.*

Speciality: Mechanical and Optical Toys.
 Model-Steam-Engines. Magic-Lanterns.
 Railways with clockwork. Railroad Supplies.

1898

Laterna Magica.

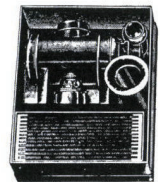
Unsere Laternen sind mit feinsten und korrekten optischen Gläsern versehen, und von ausgezeichneter Wirkung. Auch sind die beigegebenen Bilder künstlerisch ausgeführt, von bester Durchsichtigkeit und farbenprächtiger Wirkung. Die einfachen Laternen sind in eleganten Cartons, die feineren in soliden, hübsch überzogenen Holzkästen sorgfältig verpackt. Jeder Laterne ist die zugehörige Lampe und genaue Gebrauchsanweisung beigelegt.



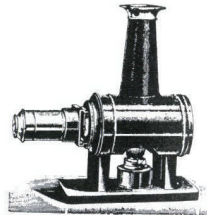
100/3 & 150/3

Laterna Magica
 gut schwarz lackiert, mit Brennöl-Lampe, in Carton verpackt

100/3 mit 6 Glasbildern, Bilderbreite 3 cm, Linsendurchm. 2½ cm per Stück fl. — 38
 150/3 (größer) mit 12 Glasbildern, Bilderbreite 3 cm, Linsendurchm. 2½ cm — 60



200 neueste Aufmachung.



200

Laterna Magica
 f. schwarz oder roth lackiert, mit Petroleumlampe, in Pappkasten (neueste, praktische Aufmachung) mit 12 feinen Glasbildern (Bilder in separaten Kästchen mit Bilderleg)

	Glasbilderbreite	3 cm	Holzbilderbreite	— cm	Linsendurchm.	2½ cm	per Stück fl.
200/3	3½	3	3½	3	3	3	85
3/4	4	4	4	4	4	4	1.20
4/4½	4½	4½	4½	4½	4½	4½	1.55
5/5	5	5	5	5	5	5	1.90
6/6	6	6	6	6	6	6	2.40
7/7	7	7	7	7	7	7	2.80
8/8	8	8	8	8	8	8	3.50
							4.25

14 General information on German magic lanterns in the middle of the 19th century is to be found in Fr. Jos. Pisko's *Licht und Farbe* (R A Oldenbourg, Munich, 1869) and in Edward Liesegang's numerous publications (Liesegang founded his firm in 1854).
 15 Lantern for 5.5cm glass slides (Pete Ariel: *Cinematographica Register*, vol. 4, Frankfurt, 1989 - ACR 954).
 16 Tin lanterns for 3.5 and 5cm glass slides.
 17 Leonhard Müller should not be confused with either Heinrich Müller, who in 1912 together with Heinrich Schreyer established the Nuremberg tin toy factory 'Schreyer & Co.' (trademark 'Schuco'), or Conrad A Müller from Nuremberg-Sprengenberg, a short-lived manufacturer of movie projectors for schools and youth in about 1927 (cf. Herbert Tümmel: *Deutsche Laufbildprojektoren - Ein Katalog*, Berlin 1986, p. 139).
 18 Ernst Hrabalek, *Laterna Magica - Zauberwelt und Faszination des optischen Spielzeugs*, Keyser, Munich, 1985, p. 163.

19 As far as it is known, Müller and Eberl were most active between 1900 and 1914. Hans Eberl's trademark before about 1906 was 'HEN' (Hans Eberl Nürnberg). The Deutsches Filmmuseum Frankfurt/M. holds a Leonhard Müller device (magic lantern and cinematograph) manufactured in 1910; for illustration see Pete Ariel, op. cit., ACR 1007.
 20 'German sources give 1863': King, op. cit., p. 163, also Pressland, op. cit. p. 16; other dates given are 1865 (Bing's own catalogues) and 1866 (Kurt Lebermann: *Die Konzentration der Bingwerke Nürnberg*, Erlangen, Leipzig, 1924, p. 4, and Roberta Basano, NMLJ, November 1996, p. 8).
 21 'O/H': read as Offene Handelsgesellschaft (general mercantile partnership with unlimited liability). The name 'Nuremberger Spielwarenfabrik Gebrüder Bing' (Roberta Basano, op. cit.) is not verifiable by my sources.
 22 Claude Jeanmaire: *Bing, die Modellbahnen unserer Grossväter - Die Geschichte des Hauses Bing*, Villigen, 1972. See footnote 71. Constance Eileen

King (*The Encyclopaedia of Toys*, New Burlington Books, London, 1978, p. 163) and, apparently following her, Roberta Basano (op. cit.) name 'Karolinenstrasse, Nuremberg' as 'Karolienstrasse, Nuremberg'.
 23 Herbert Tümmel (op. cit., p. 39) dates the beginning of Bing's lantern production to about 1899, but at that time the Bing company had already established itself as an internationally-known manufacturer of magic lanterns.
 24 Constance Eileen King, op. cit., p. 163.
 25 Kurt Lebermann, op. cit., pp. 5, 6. In later years, the Bing company also acquired premises in Nuremberg - Baumstrasse 16, Glockenhofstrasse 15, and Hinterm Bahnhof 17.
 26 Lebermann, op. cit., p. 10; Roberta Basano (op. cit.) dates the Grünheim factory to 1890 ('for the production of articles in lacquered tin').
 27 Bing catalogue (2. Nachtrag zur Spezial-Preisliste über optische und mechanische Spielwaren), July 1900.

Franglais

Canternes-magiques.

Tous nos lanternes sont munies de lentilles d'un seul verre, fait à feu couronné et d'un effet remarquable. Les mêmes verres sont en usage pour d'autres lanternes parfaites de la même construction. Les lanternes sont en métal et en carton rigide, tandis que les autres sont en bois et en carton. Les lanternes sont toutes munies de lentilles d'un seul verre, fait à feu couronné et d'un effet remarquable. Les mêmes verres sont en usage pour d'autres lanternes parfaites de la même construction. Les lanternes sont en métal et en carton rigide, tandis que les autres sont en bois et en carton.

Each lantern is delivered with the relative lamp and directions for use.

Lanterne-magique
bien versée en noir, avec lampe à huile, emballée en carton.

100/1 avec 3 verres, largeur 3 cm, diam. de la lentille 2 1/2 cm. — 75
100/2 avec 12 verres, largeur 3 cm, diam. de la lentille 2 1/2 cm. — 130

Lanterne-magique
bien versée en noir ou en rouge, avec lampe à pétrole, en carton rigide, avec 2 verres fixés.

200/1 avec 3 verres 3 cm, diam. de la lentille 2 1/2 cm. — la pièce fra. 2.00
200/2 avec 12 verres 3 cm, diam. de la lentille 2 1/2 cm. — la pièce fra. 2.65
200/3 avec 3 verres 4 cm, largeur 1 cm, d. des lentilles 3 cm. — la pièce fra. 3.30
200/4 avec 3 verres 4 cm, largeur 1 cm, d. des lentilles 3 cm. — la pièce fra. 3.90
200/5 avec 3 verres 5 cm, largeur 1 cm, d. des lentilles 4 cm. — la pièce fra. 4.75
200/6 avec 3 verres 6 cm, largeur 1 cm, d. des lentilles 5 cm. — la pièce fra. 5.90
200/7 avec 3 verres 7 cm, largeur 1 cm, d. des lentilles 6 cm. — la pièce fra. 7.40
200/8 avec 3 verres 8 cm, largeur 1 cm, d. des lentilles 7 cm. — la pièce fra. 9.05

English

Magic-Lanterns.

All our lanterns are furnished with best and optical correct lenses which produce a striking effect. All the lantern-slides are of a high finish and superior transparency. The cheaper lanterns are only packed in cardboard boxes, but all other ones are supplied in wooden cases.

Magic-Lantern
black japanned, with petrol-lamp, packed up in card board-box, with 12 slides.

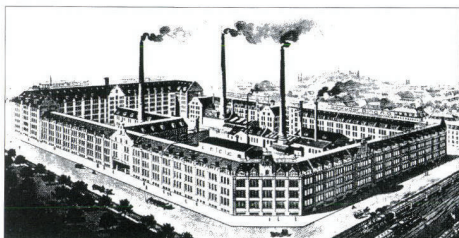
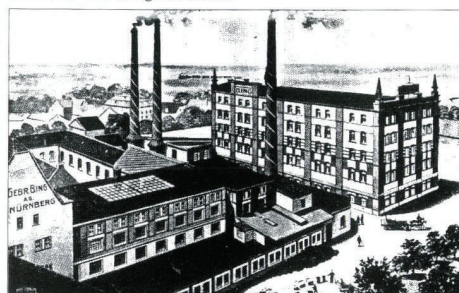
100/1 with 3 slides, 3 cm wide, diam. of lenses 2 1/2 cm. each — 75
100/2 larger, with 12 slides, 3 cm wide, diam. of lenses 2 1/2 cm. each — 130

Magic-Lantern
black or red japanned, with petrol-lamp, packed in card board boxes, new, most practical system, with 12 slides.

200/1 width of glass-slides 3 cm, diam. of lenses 2 1/2 cm. each 1/21/2
200/2 width of glass-slides 3 1/2 cm, diam. of lenses 3 cm. each 1/8
200/3 width of glass-slides 4 cm, width of wooden frames 3 1/2 cm, diam. of lenses 3 1/2 cm. each 2/8
200/4 width of glass-slides 4 1/2 cm, width of wooden frames 4 cm, diam. of lenses 4 cm. each 2/8
200/5 width of glass-slides 5 cm, width of wooden frames 4 1/2 cm, diam. of lenses 4 1/2 cm. each 3/2
200/6 width of glass-slides 6 cm, width of wooden frames 5 cm, diam. of lenses 5 cm. each 3/10
200/7 width of glass-slides 7 cm, width of wooden frames 6 cm, diam. of lenses 6 cm. each 5/—
200/8 width of glass-slides 8 cm, width of wooden frames 7 cm, diam. of lenses 8 cm. each 6/—

French, and English,²⁸ clearly demonstrates the importance of magic lantern production by this time. The front-cover announces the firm's 'Specialty: Mechanical and Optical Toys – Model-Steam-Engines – Magic-Lanterns – Railways with clock-work' and the catalogue's special 'Department Optical Goods: Magic-Lanterns, Dissolving-View-Lanterns – Large assortment of new Lantern-slides – Cinematograph – Stereoscopes – Magnifying – or Reading-glasses'. The catalogue listed eleven

Some of the Bing factories



Franglais

Lanterne-magique

bien versée en noir ou en rouge, avec lampe à pétrole, bien arrangée avec 12 verres, 1 Chromotrope, 1 paysage à mouvement et 1 tableau comique changeant soudain, emballée en caissette de bois élégante.

largeur des verres	largeur des cadres	diam. des lentilles	la pièce
400/4 4 cm	3 1/2 cm	3 1/2 cm	frs 4.85
41/4 4 1/2	4	4	5.50
5 5	4 1/2	4 1/2	6.55
6 6	5	5	8.55
7 7	6	6	10.45
8 8	7	7	12.35

Lanterne-magique 500
supprimée; pour remplacement voir No. 550 dans le II. Supplément page 154.

English

Magic-Lantern

black or red japanned, with petrol-lamp, nicely made up, with 12 slides, 1 chromotrope, 1 movable landscape, 1 comical changing tableau in wooden frame, packed in elegant wooden box.

width of slides	width of wooden frames	diam. of lenses	each
400/4 4 cm	3 1/2 cm	3 1/2 cm	5/0
41/4 4 1/2	4	4	5/2
5 5	4 1/2	4 1/2	6/4
6 6	5	5	8/6
7 7	6	6	10/7
8 8	7	7	12/8

Magic-Lantern 500
cancelled; for substitution please to see No. 550 page 154 of II. supplement.



underlined with the word BAVARIA was used from 1906³⁰ to 1912, and in a slightly modified version from 1912 to 1923. During the period of transfer from one mark to another, some toys might display both trademarks.

Besides magic lanterns, the Bing company manufactured model trains on an extensive scale, and from 1900 the firm's collaboration with the British company Basset-Lowke Ltd³¹ further stimulated the growth of GBN to the status of a leading international toy manufacturer. In 1906, Bings employed more than 3,000 workers,³² and in 1908 the firm confidently advertised itself as the 'world's greatest toy producer'.³³ By 1914 the personnel had risen to 5,000, and the share capital was 6,700,000 marks (£335,000).³⁴ The annual production of magic lanterns rose to hundreds of thousands.



models of toy lanterns and three dissolving lanterns, which were proudly offered with an introduction which runs:

The prices of our Magic-Lanterns are the same as those offered by our most important competitors; the quality of our goods however can never be compared with the great many inferior products on the market. Our production represents important improvements and the advantages we offer for this article are the following:

- 1) Superior Optics,
- 2) The overall effect and clear reproduction of our pictures,
- 3) The exceptionally elegant finish of our goods,
- 4) The solid and careful packing,
- 5) The large assortment of quite new original picture series, which are exclusively sold by our firm.

The catalogue also offered a 'Cinematograph united with a magic lantern'. The Bings were indeed 'among the first', as Roberta Basano writes, though not 'almost certainly the very first in fact, to launch on the market cinematographic toy lanterns'.²⁹ The combined device – advertised as 'Cinematograph – apparatus for projecting epoch-making animated views – Equally suitable for showing in families as in clubs – Most instructive toy of striking effect and success – As magic-lantern suitable for 3.5 cm diam. slides' – was introduced as follows:

Our apparatus is distinguished from other shapes and systems on the market, by its very cheap price, by the simple construction and by its easy management. In placing your orders please note that each apparatus will be supplied with 8 films and that we continually issue new and interesting extra films.

Magic lanterns of Bing make are characterised, and mostly easily identified, by their trademarks, which were applied by means of transfers or embossed, either directly on the tinplate of the lantern or stamped on a separate badge-like metal plate affixed to the toy. The Bings used many trademarks. From the 1890s to 1901 the mark incorporated the figure of the goddess Bavaria. This trademark was slightly modified in the period from 1902 to 1906. The well-known trademark consisting of the letters 'GBN' in circles with radial lines, generally

At home, the Bing company faced growing competition. In 1895, 56 firms, more than half of all Nuremberg toy makers, had taken up tin toy production,³⁵ and by 1905 a total of 113 tin toy manufacturers were registered in Nuremberg, employing more than 8,000 workers. The export value of Nuremberg products amounted to 64 million marks (£3.2 million).³⁶ The output of Bing's fiercest competitors exceeded 50,000 magic lanterns per year, and at the turn of the century, there were nine factories producing 'this mechanical and optical toy'.³⁷



Ernst Plank, who was to become the major producer of magic lanterns after Bing, may have been encouraged by the success of the Bing brothers to establish a tinware factory in Nuremberg. His firm was registered in the Nuremberg Business Trade Register in 1866 as Ernst Plank – Fabrik Optischer und Mechanischer Waren. Plank's oval trademark always showed the letters 'EP' beneath a

28 Nürnberger Metall- und Lackierwarenfabrik vorm. Gebrüder Bing AG: Preis-Liste über optische und mechanische Spielwaren / Tarif-Album pour Jouets d'Optique et de Mécanique / Catalogue and price-list of optical and mechanical toys, 1898.

29 The first Bing model of a toy lantern for cinematographic films – the first in Germany – was constructed as early as 1897 (Lebermann, op. cit., p. 13).

30 The GBN trademark was first registered in England on 24 October 1906.

31 Wenman J Basset-Lowke, who had established

Basset-Lowke Ltd (Northampton) in 1899, met Bing's son Stephan at the 1900 Paris Exhibition, and encouraged the Bing factories to produce model trains for his newly founded company. This agreement started his long association with the Nuremberg companies (cf. Constance Eileen King, op. cit., p. 149).

32 Kurt Lebermann, op. cit., p. 67.

33 Bing catalogue, 1908.

34 Kurt Lebermann, op. cit., p. 67.

35 Ertel, op. cit., p. 27.

36 Georg Wenzl: *Die Geschichte der Nürnberger Spielzeugindustrie* (doctoral dissertation), University of Erlangen-Nuremberg, 1967, p. 176.

37 It is most likely that these were Bing, Carette, Dannhorn, Eberl, Müller, Plank, Prager, Roose and Schoenner. Five factories employing 1013 workers produced only lanterns, four factories produced lanterns among other products; cf. Otto Senft: *Die Metallspielwarenindustrie und der Spielwarenhandel von Nürnberg und Fürth* (doctoral dissertation), University of Erlangen, 1901, pp. 41, 42.



Abtheilung I.

Laterna Magica

Skiptikons, Nebelbilder-Apparate, Kinematographen
Panorama, Lesegläser, Stereoskope.

Sehr grosse Auswahl
in
Extrabildern und Märchen
Photographischen Glasbildern
Beweglichen Verwandlungsbildern und Filmstreifen.



Skiptikon „Special“.

Dieser Projektions-Apparat ist für Schulen und chemische Laboratorien sehr zu empfehlen; denn die Anordnung des Objektives ist eine so vorteilhafte, dass auch umfangreichere Gegenstände projicirt werden können.

Der Apparat ist aus extrastarkem, ausgewählt bestem, blau polirtem Stahlblech gemacht, und vereinigt sich bei «Special» alle diejenigen Eigenschaften in erhöhtem Masse, welche über die Skioptikons niedergeschrieben sind. Das Ganze ruht auf mahagoni-polirtem Tischen von ausgesucht trockenem Holz. Das auf der Zeichnung vor besserer Veranschaulichung dargestellte «Goldblatt-Elektroskop» wird nicht mitgeliefert, dagegen ist «Special» mit einem äusserst praktischen Bilderhalter ausgestattet.

No. 765 Skioptikon «Special» mit Tisch, Doppel-Objektiv und 108 mm Beleuchtungs-linsen, mit Petroleumlampe oder mit Gasglühlicht oder elektrischer Lampe, inklusive Packing — ohne Bilder — 1 Stück

Hierzu können alle Bilder bis zu einem Bilddurchmesser von 75 mm verwendet werden.

No. 765 Skioptikon «Special» 1/2 nat. Grösse.



Skiptikon „Universal“ mit Bogenlampe.



Bogenlampe mit Strom-Regulator.

No. 765/1 «Universal I» hochfeiner Apparat mit achrom. Doppel-Objektiv und Beleuchtungs-linsen 150 mm Durchmesser, mit elektrischer Bogenlampe und Strom-Regulator — entweder für Gleichstrom- oder Wechselstrom gerichtet — mit Ersatzkohlen, komplett in Kasten — ohne Bilder — . . . 1 St.

No. 765/2 «Universal II» Apparat wie 765/1, grösser, mit extra grossen achrom. Doppel-Objektiv und Beleuchtungs-linsen 150 mm Durchmesser, mit elektrischer Bogenlampe u. Strom-Regulator — entweder für Gleichstrom oder Wechselstrom gerichtet — mit Ersatzkohlen, komplett in Kasten, ohne Bilder, 1 St.

Bei Bestellung der Nr. 765/1 u. 765/2 ist stets mit anzugeben, ob Gleich- oder Wechselstrom und welche Anzahl «Volts» vorhanden ist.

Fabrik-MARKE

No. 765/1 Skioptikon «Universal»

winged wheel. Unlike the Bings' trademark Plank's was retained throughout decades, with only slight modifications of the wings.

Little is known about the background of Ernst Plank, whom Basano describes as one of the 'most aggressive competitors of the Brothers Bing'. Plank was trained as a tinsmith and examined as 'Flaschnermeister' (master tinsmith).³⁸ His earliest products included magic lanterns, and in the following year he also began to manufacture brass steam engines. Plank's lanterns were equipped with an improved Argand wick, invented and developed by Plank in order to achieve an exceptional concentration of light. In 1894, some 120 workers were employed. The Plank company quickly became renowned for its brass engines and magic lanterns, and their catalogues proudly advertised the gold medals awarded them at the Paris International Exhibition of 1900³⁹ and the 1906 Bavarian Trades Show.⁴⁰

About the turn of the century, the Plank company widened its scope to include tin-toy steam accessories, cars, boats and model trains. At that time, the firm produced some 80,000 steam engines and locomotives, and about 150,000 magic lanterns each year. Plank lanterns bore such impressive model names as 'Solid', 'Standard', 'Acme', 'Globus', 'Triumph', 'Climax', 'Atlas', 'Gloria', 'Helios', 'Prophet', 'Evening Star', 'Skiptikon', 'Skiptikon Diamant', 'Skiptikon Superior', 'Skiptikon Juwel' and 'Skiptikon Special'. The sale of these lanterns was partly handled by Plank's own sales organisation (which was apparently not as world-wide as Bing's), but also — as Plank's catalogues note — 'as in the past through

well-known retailers from Nürnberg-Fürth. This explains why advertisements for lanterns of Plank's manufacture are to be found in many retailers' catalogues, in most cases identified by illustrations clearly showing the 'EP' trademark.



The next magic lantern manufacturer to establish a factory in Nuremberg was **Max Dannhorn**, who founded his firm in 1872, and, unlike Bing and Plank, specialised exclusively in magic lanterns. He was noted for producing extraordinarily beautiful lanterns, and his 'Columbus's Egg' lantern of 1885 won fame.⁴¹ Dannhorn's production expanded rapidly, and before the turn of the century the firm was transferred to a joint-stock company under the style of 'Metallwarenfabrik vorm. Max Dannhorn AG, Nürnberg' (tinware factory formerly named Max Dannhorn).⁴²

investment by shareholders was acquired, but the leading position of the 'former' Max Dannhorn is questionable.

43 Hans Lotter: *Gross Industrie und Gross Handel von Nürnberg/Fürth und Umgebung*, published by the author, Nuremberg, 1894.

44 Johann Siegmund Schuckert (1846–95), having

The Dannhorn factory chose as trademark the initials of its founder, 'MD', but unfortunately for later research, this trademark was only very rarely applied to the products. The factory used other symbols, for example a fir tree, which makes the identification of Dannhorn lanterns much more difficult than those of Bing and Plank. In consequence Dannhorn lanterns are often wrongly ascribed to other manufacturers.



Three years after Max Dannhorn, **Jean Schoenner** began to manufacture magic lanterns in Nuremberg. Whereas Dannhorn had established a 'factory', Schoenner began his activity on a modest scale in 1875, with a simple workshop and a handful of workers. We learn something about Schoenner's background from the following contemporary account, written in the quaint language of the time.⁴³

Mr Schoenner, whose first master was the famous electrician Sigmund Schuckert,⁴⁴ obtained further technical knowledge not only in other large cities of Germany, but also abroad, and only after he had, in his efforts to become independent, drunk to the dregs the bitter cup of affliction and pain, was he able, in the year 1875, with modest means and three industrious helpers and a skilled glass painter, who still stand by him today, to open his own workshop.

From the same source we learn of Schoenner's

been trained by working for Thomas A Edison and others in the USA, established in 1873 the Elektromechanische Werkstätte Schuckert & Co. in Nuremberg, which was transformed to the joint-stock company Elektrizitäts-Aktiengesellschaft in 1893 (later Siemens-Schuckert-Werke AG, today part of the Siemens combine).

38 Ertel, op. cit., p. 156.

39 Ernst Plank: Preis-Liste, 1902.

40 Ernst Plank: Preisliste über optische, mechanische und elektrische Waren — Physikalische Spiele und Lehrmittel, 1914.

41 Ernst Hrabalek, op. cit., p. 161.

42 The change of style indicates that a capital

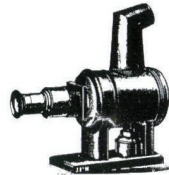


Laterna magica.

Gute billige Ausführung, mit feinen, optischen Linsen, Petroleumlampe und Glaszylinder, in Karton verpackt.

No.	19/1	mit 6 Glasbildern	2 1/2 cm,	Objektiv 25 mm.	per Stück M.
19/2	6	3	25	"	"
19/3	12	3 1/2	30	"	"

Laterna magica in sehr solider Ausführung in fein überzogenem Karton.

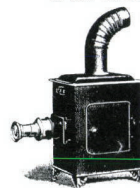


Fein rot lackiert, mit besten, optischen Linsen, Petroleumlampe und Glaszylinder.

No.	17	18	20	21	22	23	24	25
mit	12	12	12	12	12	12	12	12 Glasbildern
Bilder	3	3 1/2	4	4 1/2	5	6	7	8 cm breit
Objektiv	25	30	35	40	45	50	55	60 mm Durchm.
M.								per Stück

Feine Laterna magica

in sehr solider und sehr eleganter Ausführung in fein überzogenem Karton.



Mit hochelegantem Nickel- und Messing-Objektiv.

Mit 3 besten optisch geschliffenen Linsen.

Mit feinem Reflektor, tadellos Petroleumlampe und Glaszylinder.

No.	110/1	Objektiv 30 mm,	mit 12 Glasbildern	3 1/2 cm breit	per Stück M.
110/2	35	12	4	"	"
110/3	40	12	4 1/2	"	"
110/4	45	12	5	"	"
110/5	50	12	6	"	"

Extrabilder siehe Seite 12-15.



subsequent success: 'out of which has developed an industrial concern which today (1894) is unique, employing 250 persons'. Following the pattern established by Bing, Plank and Dannhorn, the Schoenner factory concentrated the production of its early years upon 'mechanical-optical toys', that is, steam engines and magic lanterns.⁴⁵ The figure for Schoenner's production of lanterns is unknown, but since his output of steam engines reached 300,000 in 1892 it is likely to have been considerable. In the beginning, Schoenner's products were identified by the trade mark 'SN', but in later years by 'JS'.

In 1891, the Nuremberg merchant Adolf Dihlmann⁴⁶ became a partner in Schoenner's firm, perhaps because new investment was needed following a fire that year which necessitated complete re-equipment of the factory. The name of the company was changed to 'Jean Schoenner mechanisch-optische Spielwarenfabrik - Inhaber: Jean Schoenner & Adolf Dihlmann'. Dihlmann's contribution no doubt played a part in the successful further development of the company, though the firm was renamed later 'Nürnberger Mechanisch-optische Spielwarenfabrik Schoenner GmbH'. In spite of the omission of his name from the changed style of the GmbH (private limited liability company), Dihlmann remained co-owner.⁴⁷ The Schoenner company set up a factory in Muggendorf,⁴⁸ and about the turn of the century broadened its scope to include toy boats and fire engines, the majority of them powered by steam, and also electric toy tramcars.⁴⁹ The promising development of the Schoenner company, however, for some reason

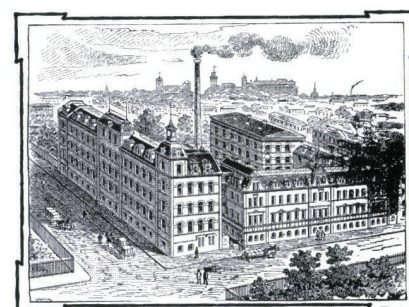
turned to an decline. The details of the manufacturer's misfortunes are still unclear, but all traces of Schoenner production disappear before 1914. In the Nuremberg business directory of c.1913 there is no longer any entry for this firm,⁵⁰ and no toys produced after 1906 are known. So we may assume that Schoenners was forced to cease activities about 1906.

Some of the firm's tooling machinery appears to have been taken over by another Nuremberg magic lantern manufacturer, **Johann Falk**, who had set up a tin toy factory just before the turn of the century, and who had certainly taken over part of the Schoenner production at some time before 1914.⁵¹ Falk comes into the story a little later however.

The next magic lantern manufacturer to establish himself in Nuremberg was an expatriate Frenchman who, in 1886, founded the company of **Georges Carette & Co.** Georges Carette was the son of a Parisian photographer, who had married a German. As a Frenchman and a photographer, he was an outsider among the Nuremberg tin toy manufacturers, but made his way thanks to his professional knowledge and an element of genius. Carette started his connection with the toy market as distributor for the Brothers Bing, and went on to develop production of tin toys of his own design,⁵² including lanterns,⁵³ with the financial backing of a wealthy Bavarian hop merchant,⁵⁴ who is probably the '& Co.' of the company title. Besides manufacturing magic lanterns, Carette was among the first to produce electric toy tram-cars,⁵⁵ and won worldwide

fame with his participation at the Columbia World Fair in Chicago in 1893. Like Bing and Plank, before 1900 the Carette company produced a wide range of mass-produced tin and brass toys, including steam engines, locomotives and trains as well as magic lanterns and (later) cinematographs - advertising themselves as 'Manufacturers of Mechanical, Optical, Electrical and Physical Toys and Working Models'. The Carette catalogues announced 'spacious showrooms' at 8 Finsbury Square, London EC.

Georges Carette & Co. NÜRNBERG



MANUFACTURERS of Mechanical, Optical, Electrical and Physical Toys and Working Models

45 An entry in the trades directory of Nuremberg (1880 edition) says: 'Jean Schoenner, Nürnberg, Gostenhof, Dammstrasse 5 & 7, mechanical and optical factory. Specialities: magic lanterns, model steam engines, physics toys'.

46 Often written incorrectly as 'Dittmann'. Adolf Dihlmann had been working in France for some time, and it is reasonable to assume that he became acquainted with French magic lantern production.

47 Entry in the Nuremberg trades directory of 1905 shows the company still located in Dammstrasse, and the sole owners still Schoenner and Dihlmann.

48 The factory of Muggendorf (Fränkische Schweiz,

'Franconian Switzerland'), often wrongly described as a Swiss factory, was located in Franconia (northern Bavaria).

49 As Schoenner's competitor Carette, cf. Ernst Hrabalek, op. cit., p. 163.

50 Claude Jeanmaire: *Nürnbergerspielzeug - Jean Schoenners Spielzeugbahnen und Schiffe* (Toys of Nuremberg - Jean Schoenner's Toy Railways and Ships), Verlag Eisenbahn, Villigen, 1977, p. 5.

51 Ernst Hrabalek, op. cit., p. 161, dates the take over to 1908 ('Johann Falk is ascribed the take-over of the firm of Jean Schoenner, 1908'), and also to 'after 1904' ('Little is known about the end of this firm. It seems likely that the activity was taken

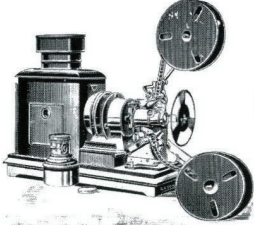
over by Jean Falk after 1904'), op. cit., p. 163.

52 Ertel, op. cit., p. 154.

53 Roberta Basano (op. cit., p. 8) notes an interesting detail: Carette, having been a 'middle-man' for Bing, 'started his business in 1886 after having visited the Lapiere factory and stolen some of their production secrets - a true case of industrial espionage'.

54 'Hopfen-Handler' refers to an occupation in Bavaria breweries (not, as often erroneously understood, to a member of a brewery family called 'Hopf').

55 Ernst Hrabalek: *Laterna Magica - Zauberwelt und Faszination des optischen Spielzeugs*, Keyser, Munich, 1985, p. 161.



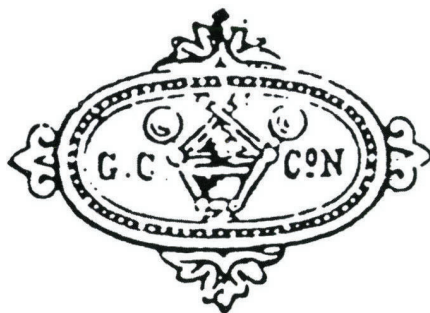
CINEMATOGRAPHS

HIGH CLASS PROJECTION CINEMATOGRAPHS
FOR ALL KINDS OF ILLUMINATION.

Artistically executed
SETS OF FILMS

Artistically executed
LANTERN SLIDES

From the turn of the century Carette expanded rapidly, stimulated like Bing by a joint venture with the British firm of Basset-Lowke Ltd.⁵⁶ and produced a vast range of toys including cars, boats,



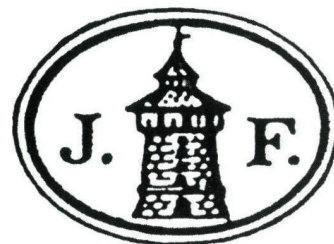
railways, aircraft and steam accessories. Production of magic lanterns meanwhile continued. One of the more expensive models, Carette's 'Best Quality Magic Lantern', produced just before the First World War, was described in the catalogue as having 'excellent definition'.⁵⁷

Carette's original trademark was a winged figure, accompanied by the words 'Jouets fins - Fine toys - Feine Spielwaren', but this was supplanted in 1895 by the company's initial letters, 'GCCoN' (George Carette & Co., Nürnberg) on an applied tin plate. From 1905 until the cessation of production in 1917 the trademark was the well-known sprocket-wheel symbol, with the letters 'GCCoN'.

The firm of **Johann (Jean) Falk**, which has already been mentioned, was the last magic lantern factory to be established before the First World War. Falk, apparently of Jewish origin, had worked as a traveller for the Carette company before establishing his own factory in Nuremberg, at Solgstrasse 19. The exact date of the foundation is unknown, but most sources agree that it was about 1895.⁵⁸ A doctoral thesis on Nuremberg toy production published in 1901⁵⁹ mentions an 'enterprise founded just a few years ago'. The author deals with five magic lantern manufacturers (referred to as 'No. I', 'No. II' and so on), explaining that three of them started as 'simple master-tinsmiths' (one of them having grown up in an orphanage) and were now 'big factory-owners' employing hundreds of workers. If we are right to assume that the recently founded factory designated by the author as 'No. II' is that of Jean Falk, it leads us to suppose that his factory was the smallest of them all, employing 23 male and 26 female workers.

In subsequent years, Falk's name appears in connection with those of established Nuremberg manufacturers, and we can assume that, in the beginning, he was working as a distributor for them.

In any event, Falk also started his own tin toy production, with his trademark 'JF' framed in an oval, embossed on the tinplate. As we have seen, the enterprise was sufficiently flourishing to have, apparently, taken over at least part of the Schoenner production in 1906 or 1908. Certainly some of the Schoenner tooling seems to have been adopted by the Falk company before the outbreak of war in 1914.



The decline of Nuremberg magic lantern production was initiated by the First World War. Georges Carette, who had retained his French citizenship, severed his link with the Nuremberg business shortly after the outbreak of the war and, though married to a German, either decided or was forced to repatriate to Paris. His firm, under custody as 'alien property', continued to trade until 1917. In that year all toy production in Germany was halted as a result of the 'Hindenburg programme', which demanded complete dedication of all industrial activities to armament production. The Nuremberg toy manufacturers, along with the rest, were forced to cease their normal production.

While Carette's activities ceased in 1917,⁶⁰ the Dannhorn company managed to survive until the end of the war, when they too, due to the prevailing

No. 387

High class Magic Lanterns

body of polished Russian iron, with fine brass objective, double condenser, paraffin lamp with round wick, automatic slide holder, holding either thick or thin slides always in focus.

Each lantern has:

No. 387/1	2	3
Slides 2	2 1/2	2 1/2
Objective 1 1/2	2	2 1/2
each 15/-	17/6	20/-
No. 387/4	5	6
Slides 3 1/2	3 1/2	4
Objective 2 1/2	2 1/2	3 1/2
each 24/6	29/-	33/-

1 transformation scene, 1 moving landscape slide, in handsome and prettily covered wood box with separate sliding case for slides.

These lanterns can also be supplied with an attachment permitting the use of electric lighting.

Universal Lamp
for electric illumination
for incandescent lamps
(carbon or metallic or Nernst) to fit all the lanterns from 1 1/2" width of slide, with adjustment for height, 2 yards of duplex wire and with the following type of adaptor, but without lamp.

No. 387 E with Edison standard screw connection, each 4/-
— 387 E 6 — plug connection — 3/10
— 387 E 7 — combined adaptor for either connection — 5/-
— 387 E 8 — bayonet plug and swan bayonet lamp holder — 3/-
— 387 E 9 — with plug adaptor and swan bayonet lamp holder — 4/-

No. 387 with 455/2
Further the Lantern No. 387 can be lighted by **Acetylene Gas** (see above illustration) by using the **Acetylene Burner** No. 455/2 or the **Acetylene Double Burner** No. 455/2 D, in conjunction with the **Gas Generator** No. 455/4 and 455/5 respectively for double burner.
No. 455/2 Acetylene Burner — each 4/6
455/2 D Acetylene Double Burner — 6/10
— 455/4 Acetylene Gas Generator to supply gas for 3 hours — 8/6
— 455/5 Acetylene Gas Generator to supply gas for 6 hours — 14/6
(For fuller description and illustrations of Acetylene Burner and Generator see page 141 of this list.)

Best Quality Magic Lanterns

Excellent definition.

Body of polished, blue steel plate, with automatic slide holder to keep either thick or thin slides properly in focus, fine brass objective with rack and pinion movement, with superior, new design 2 flame paraffin lamp, giving a brilliant light without smoking.

Each lantern has:

No. 388/1	2	3	4	5	6
slides 2	2 1/2	3 1/2	3 1/2	4	4
lenses 1 1/2	2	2 1/2	2 1/2	3 1/2	3 1/2
each 23/6	26/6	34/-	40/6	50/6	55/-

12 handsome covered glass slides, 1 chromotrope, 1 transformation scene, 1 moving landscape scene, in handsome, elegantly covered wood case with 2 separate removable cases for the slides.

Further with lantern 388 acetylene gas can be used, (see illustration 388A) by employing the **acetylene lamp** No. 388A in conjunction with the **acetylene generators** No. 455/4 or 455/5.

No. 388A acetylene lamp with burner for lanterns 388/1-6, each 8/-
— 455/4 acetylene generator for 3 hour's light, each 8/6
— 455/5 acetylene generator for 6 hour's light, each 14/6

(For further description and illustrations see page 141 of this list.)

56 The Great Toys of Georges Carette, A Trade Catalogue for mechanical, optical and electrical, teaching material and toys, edited and annotated by Allan Levy, New Cavendish Books, London, 1979; cf. Constance Eileen King, op. cit., pp. 152, 164.
57 King, op. cit., p. 146.

58 Roberta Bassano, op. cit., dates the foundation to 1898 (without source).
59 Sentf, op. cit., p.4 3.
60 Although Carette's patterns and tools were widely dispersed after 1917, the firm's work did not disappear entirely without trace. Former Carette

toys appeared later bearing the Karl Bub trademark, and Basset-Lowke in Northampton continued to produce former Carette locomotives and rolling stock during the post-war period. A Carette still appears on the shareholders' list of Basset-Lowke Ltd: cf. The Great Toys of Georges Carette, op. cit.

BING

METALL SPIELWAREN

JOUETS EN METAL

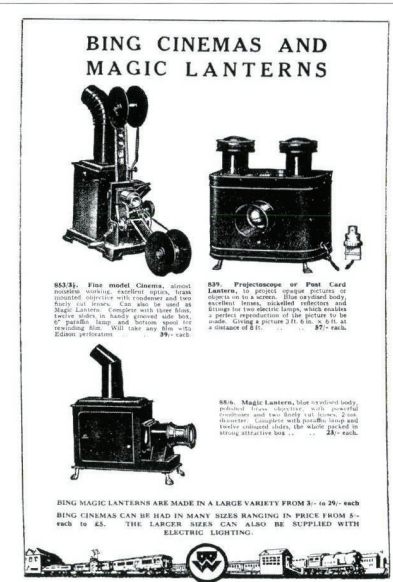
JUGUETES DE METAL

1930



Bing Werke vorm. Gebrüder Bing A.G. Nürnberg, Fabrik feiner Metall-Spielwaren.

1927



conditions, were forced to cease production of magic lanterns. In 1921, the majority of the shares were taken over by the Bing Brothers.⁶¹ From that date, the Dannhorn factory was absorbed into the Bing group and was to share the fate and ultimate decline of the company.

Bing appeared to emerge from the war in excellent condition and well prepared for future expansion. Only one year before the end of the conflict, Ignaz Bing (who was to die in 1918) established the 'Concentra' company as a worldwide sales organisation ready for post-war conditions, and his son Stephan, who had spent years in the business and succeeded his father as chairman of the board of directors, continued in the expansionist policies. Several other companies besides Dannhorn were taken over, and the rapidly growing combine of firms required reorganisation. At the end of the inflation period in Germany (1923), the style of the company was changed to Bing Werke vorm. Gebrüder Bing AG Nürnberg, Fabrik feiner Metallspielwaren. At the same time, the traditional trademark was changed to a more modernist, simplified style of a 'B' over a flattened 'W'.⁶² Some toys were also stamped 'BW GERMANY'. The new trademark was retained until the end of production in 1932/34.

During the 1920s high production levels were maintained, and 5,000 workers were employed at the factory in Stephanstrasse, Nuremberg, in 1924.⁶³ But magic lanterns no longer appear as an important part of production, though they continued to be included in Bing's catalogues.⁶⁴ The post-war lantern trade in fact concentrated on toy cinematographs which could also be used as lanterns – the Bing catalogues sought to extol the 'wonderful attraction of the magic lantern'.

The vast expansion of the Bing combine in fact overshadowed this 'old-fashioned' branch of production. Due to differences with the supervisory board on the firm's future policies, Stephan Bing severed all connexions in 1927,⁶⁵ resulting in a further re-organisation of the company.⁶⁶ The Bing family no longer held its position as managing owners and driving force. Though the turnover of Bing's reached 27 million marks, the firm encountered new difficulties after the re-organisation, due to a combination of the lack of a centralised policy and the effects of the world slump, starting at the end of the 1920s. The great Depression of 1929 indeed proved disastrous for Bing.⁶⁷

The Bing catalogue of 1930 offered no magic lanterns at all.⁶⁸ The Supplement of 1931,⁶⁹ the last to be published, offered only a simple toy lantern illuminated by a torch battery. In 1932, the firm was finally wound up and put into receivership. All toy production stopped at some point over the next two years; workers involved in toy production were dismissed, and the concern was broken up.⁷⁰ The remaining stock, some tools and parts of the sales organisation were taken over by other Nuremberg manufacturers, such as Falk, Joseph Kraus and Karl Bub. However, thanks to a new state employment programme in 1934/35 and a compulsory composition in the bankruptcy court (20 December 1936), the Bing company managed to survive and recover; and, though with radical changes in the range of production, it remains active today.⁷¹

The Plank Company resumed tin toy production after the First World War, but never recovered from the war restrictions. Lantern production faded out in the 1920s, due to the advent of home movies, with Pathé's 9.5mm and Kodak's 16mm cameras and

projectors. The last model locomotives were manufactured about 1928. All tin toy production ceased in the 1930s, when the firm had to face the worldwide depression which was to prove disastrous for Ernst Plank also. The factory was sold to Hans and Fritz Schaller, two enterprising businessmen who – in defiance of the economic crisis and unemployment standing at 7 million in Germany – set out to re-organise the production, specialising in home-movie equipment. Projectors manufactured under the new name of 'Ernst Plank KG Noris Produktion' proved major selling hits in the 1930s.⁷² These projectors were the forerunners of the 'Noris' amateur cameras and projectors which were marketed successfully after the Second World War⁷³ – now omitting the name of Ernst Plank, with the style of 'Noris Projektion GmbH, Nürnberg'.⁷⁴

Jean Falk too resumed manufacture of toy lanterns after the First World War, extending the scope of production to toy cinematographs. In the 1920s he established a close co-operation with Bing, and some products showed the combined trademark 'JF' (upright, above) and 'BW' (underneath, with the B crossways above the W). Falk, by this time distinguished with the title of 'Kommerzienrat' (Councillor of Commerce), continued to manufacture magic lanterns until the 1930s. The last Falk catalogue known to me,⁷⁵ offered four toy lanterns lighted by oil lamps – 'Laterna magica', 'Laterna magica in sehr solider Ausführung' (very solid magic lantern), two 'Feine Laterna magica' (fine magic lanterns) and two 'fine lanterns' illuminated by electric bulbs, as well as four combined models ('Kinematograph, zugleich auch Laterna magica') illuminated respectively by oil lamp, electric bulb or torch battery. As mentioned above, Falk acquired

61 Lebermann, op. cit., p. 9.

62 In England the BW trademark was first registered on 23 May 1923.

63 Lebermann, op. cit., p. 38.

64 Three lanterns (nos. 10/86, 10/846 and 13/333) were offered in the 1927 catalogue as well as in the 1930 catalogue, where they were complemented by two lanterns – nos. 10/8150 and 10/8151 – with electric light. The 1931 supplement to the latter catalogue offered in addition model no. 10/8152, lighted by an electric torch.

65 About that time, Stephan Bing established a factory producing model trains (trademark ('Trix'), which proved to be successful in the next two decades and was still operating after the Second World War. Stephan Bing seems to have returned to his family's firm in the following years, apart from a period starting with the firm's bankruptcy petition (24 August 1932) until December 1934, but his position is unclear.

66 After a reduction in the company's capital from 13.75 million marks to 3.44 million marks in 1927, the capital was raised again to 10 million marks.

67 Constance Eileen King, op. cit., p. 142.

68 *Bing Metall Spielwaren – Jouets en metal – Juguets de metal 1930*, published by Bing-Werke Nürnberg. This catalogue contains several models of magic lantern-like cinematographs.

69 1. Nachtrag – 1^{er} supplément – 1^{er} supplemento 1931: *BING – Metall Spielwaren – Jouets en metal – Juguets de metal*, published by Bing-Werke Nürnberg.

70 Constance Eileen King, op. cit., p. 163.

71 Under the style of 'Nowag Noris-Werke AG' (Claude Jeanmaire: *Bing, die Modellbahnen unserer Grossväter – Die Geschichte des Hauses Bing, Nürnberg, von 1866–1933 (–1966)* [Bing, Grandad's Model Railway – The fascinating history of an early model railway manufacturer and its production from 1866 to 1933 (–1966)], Verlag Eisenbahn,

Villigen, 1972, pp.15–21). The style of 'Bing Werke' is also kept in use in some cases, apparently in connection with reprints of toy catalogues. Following uncredited sources, the proprietorial interest in the name Bing was acquired by the Swiss publisher Verlag Eisenbahn during the 1960s, and it is understood that the share capital of the original firm was also acquired by that firm.

72 The 1938 'Noris 16' movie projector is illustrated by Pete Ariel, op. cit., ACR 1044. The 'Noris' trademark was used from the 1910s for movie projectors by the Nuremberg-based firm of Seischab & Co. (Herbert Tümmel, op. cit., p. 169).

73 The 1955 'Noris 8 D' camera and the 1954 'Noris 8 Super' projector are illustrated by Pete Ariel, op. cit., ACR 1045 and 1046.

74 Heino König, foreword to: *Ernst Plank, Nürnberg, Katalog-Ausgabe EP, 1903*, reprinted by Weinheimer Auktionshaus, Weinheim, 1973.

75 J Falk, Nürnberg, n.d., published in about 1931.

parts of the Bing production in 1932, so we may assume that he successfully pursued a policy of expansion in spite of the worldwide depression. Only a few years later, with the rise of Nazism, he was threatened with expropriation. In order to anticipate this, in 1935 he sold his enterprise to the Schaller



brothers, already owners of the Plank firm.⁷⁶ The Falk factory was thus to share the fate of Plank's in the years that followed.

Joseph Kraus, who like Falk had taken over parts of Bing's production in 1932, was not as 'fortunate' as his competitor and fellow Jew. His factory was declared 'non-aryan property' and was closed down



in 1938. Until that date Kraus continued to manufacture toy trains, but I am not aware whether he was ever a producer of magic lanterns.

The same question also remains in the case of the third firm which took over of some of Bing's equipment, **Karl Bub**. The Bub company, founded in Nuremberg in 1851⁷⁷ and in 1932 owned by Kommerzienrat Huck, is known to have manufactured a variety of tinplate models,⁷⁸ and to have produced items in collaboration with Carette and, indeed, to have continued to market these after Carette's closure in 1917.⁷⁹ Though the precise division of manufacture between these firms is still unresolved, it is reasonable to assume that the cooperation would have included Carette's favourite production of magic lanterns. Unfortunately, however, I have been unable to find any evidence for this thesis, nor, equally, in the case of the parts of Bing production taken over by Bub. In the early 1930s Bub produced trains previously manufactured by Bing, with the trademark KB/BW – combining the Bub (KB) and Bing (BW) trademarks⁸⁰ – but there is no evidence of Bub manufacturing magic lanterns.

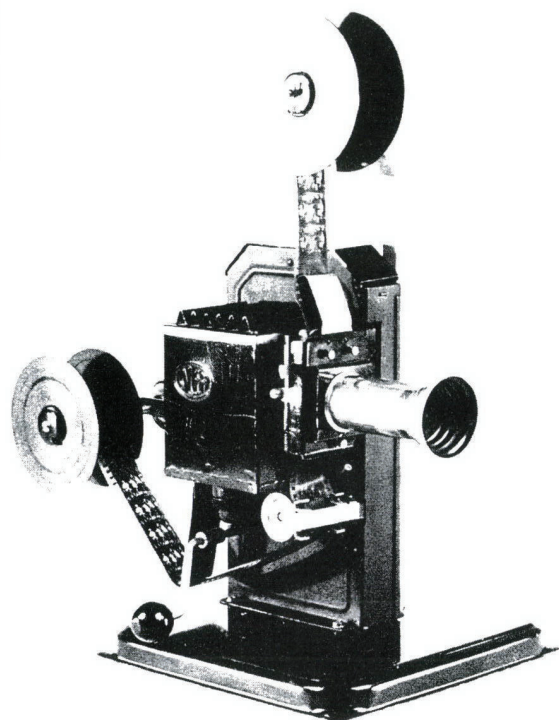
Kommerzienrat Huck had apparently been more interested in the acquisition of some of Bing's tools for the then promising production of toy trains, than in the declining fortunes of magic lanterns.⁸¹

An interesting footnote to the Nuremberg tin toy production – and a possible source of confusion to collectors – is the firm of **Moses Kohnstam**, established in nearby Fürth in 1875.⁸² Many of the toys which he marketed bore his own trademark 'Moko'. This would have been quite normal if Kohnstam had himself been a manufacturer himself, which he was not. An article whose source I am unable to identify states that 'Moses Kohnstam's business is interesting because, like that of his life-long competitor Eisenmann, with its trade-mark 'Einco', it was a pioneer distributor of toys for all but the largest German manufacturers. Kohnstam and Eisenmann alike acted as commission agents, collecting toys from a host of small German manufacturers, listing them in catalogues, and offering them for sale on commission throughout Europe. About 1880 they inaugurated the Manchester Toy Week, which was attended by buyers from the North of England and was the forerunner of the Harrogate Toy Fair'.⁸³

In many – if not all – cases, Kohnstam persuaded manufacturers to emboss the 'Moko' trademark on the tinplate or to stamp it on a separate metal plate affixed to the toys. His technique of selling was apparently successful. In 1890 one of his sons, Julius, established a branch office in London, and by 1894 Kohnstam also had offices in Milan and Brussels. Moses Kohnstam died in 1912, aged 72,

succeeded by his three sons. In 1914, the London branch was expropriated by the British government, but after the war it was re-established as a separate business, J Kohnstam Ltd.⁸⁴ The German branch continued to exist during the 1920s, but all sign of activity ceases after 1933. The last Kohnstam catalogue known to me dates from 1928–30. It offered five toy lanterns⁸⁵ and five 'Cinematographs, combined with Magic lanterns'.⁸⁶ None of them apparently bears the MOKO sign, but two show Plank's 'EP' trademark.

To conclude this survey of Nuremberg manufacturers, I would like to mention a factory of optical products which arrived too late to play a significant role in the history of magic lanterns. In the late 1920s, the firm of **Optische Anstalten A Lehmann**⁸⁷ established a production of home cinematograph equipment in the nearby city of Fürth. The range of equipment also included devices combining cinematograph and magic lantern.⁸⁸ Projectors and cameras were sold under the trademark 'Alef' (presumably shortened from 'A Lehmann, Fürth'). Though Alef entered the home-movie market relatively late, its products were sold successfully, particularly since they were extremely inexpensive. In 1929, Alef advertised three models of projector: 'Privat', for 9.5mm films,⁸⁹ 'Alcin' for 16mm, and 'Norcin' for 35mm. The name of a fourth model, 'Vokin', also using 35mm film, probably indicates that it was intended for the projection of sound film. In 1933, the registered office of the firm was transferred to Berlin, and there is no record of any activity after 1935.⁹⁰



76 Ernst Hrabalek, op. cit., p. 161.

77 In the 1880s the firm had offices at Tetzelsasse, Nuremberg.

78 Although little is known of Bub's 19th-century toy production, motor cars and trains were manufactured in the early 1900s. Bub prospered in the 1920s, listing a wide range of motor cars, trains and railway accessories.

79 Constance Eileen King, op. cit., pp. 152, 163.

80 Jeanmaire, op. cit. (1972), p. 19.

81 The Bub company survived the Second World War, but its post-war history was one of decline. The firm ceased trading and closed in 1967.

82 Offices at Nürnberger Strasse, Fürth.

83 Unfortunately, I can but quote without credits as I

was not able to identify the source.

84 Constance Eileen King, op. cit., p. 170. J Kohnstam Ltd was sold to Lesney Products in 1959, and sometime afterwards Richard Kohnstam, the grandson of the founder, began a new import business known as Richard Kohnstam Ltd, using the trademark 'Riko'. In 1969 Richard Kohnstam took over the Beatties chain of model shops, which included the original Basset-Lowke retail outlets.

85 MOKO catalogue 1928/30, nos. 5506/1–3 ('Magic lanterns, tin painted, light finish'), 5501/4 and 5502/ 5 ('Magic lanterns, steel-coloured tin, good lenses'), 5503 and 5504 ('Magic lanterns, japanned tin'), plus no. 5505 (the same lantern with English mounting – Swan type).

86 MOKO catalogue 1928/30, nos. 5506/1–3, 5506/4–7, 5506/8–14 ('good lenses, well made'), 5507 ('fitted for electric light'), and 5509 ('best lenses, fitted for electric light').

87 Not to be confused with the still existing Nuremberg tin toy manufacturer E P Lehmann (founded in Brandenburg in 1882).

88 Pete Ariel, op. cit. (ACR 516), gives an illustration of a 35mm projector fitted to project magic lantern slides (4cm glass slides). This device was produced as late as 1935.

89 An illustration of Alef's 9.5mm camera is to be found in Pete Ariel, op. cit., dated to 1932 (ACR 0983).

90 Herbert Tümmel, op.cit., p. 19.