The Magic Lantern

GERMAN TOY MAGIC LANTERNS – PROJECTING PHENAKISTOSCOPES

Part 1 – Simple lanterns

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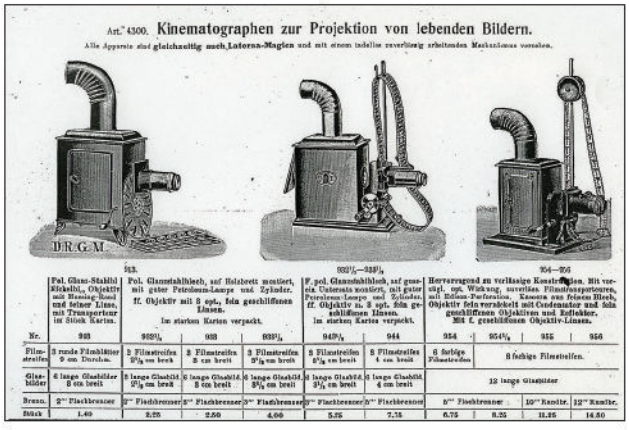
This is the first of three articles looking in detail at toy projecting phenakistoscopes, starting with some simple examples and continuing with those of Ernst Plank (part 2) and Jean Schoenner (part 3) in subsequent issues of The Magic Lantern.

Several small magic lanterns were made to project celluloid discs with sequences of moving images as well as magic lantern slides. Usually these are made of Russian iron and the mechanism for moving the discs is very simple. They use no rotating shutter between the projected single images. No manufacturer's mark is visible on the lanterns. Most of them bear only the letters D.R.G.M. (Deutsches Reichs Gebrauchsmuster – patented design of the German Reich) and were almost certainly made in Nuremberg or Fürth.

Examples are found in catalogues from the German retailer Hermann Bade, Hildesheim (Fig. 1) and through these we can determine the period of manufacture for these lanterns. The catalogues date from the years 1909/10 until 1911/12 and show the same cinematograph which included three 'film sheets' of diameter 9 cm and six long slides of height 3 cm. In the first catalogue (1909/10) a set comprising a lantern with only one 'film sheet' and three long slides was offered – the cheapest cinematograph in the catalogue. The picture discs are printed by colour lithography on celluloid that is slightly stronger than the 35 mm film loops of that time. These lanterns are rare.

The known examples can be divided into two types – called A and B here. In type A lanterns the picture disc is placed below the lens and the images on the disc are therefore in a vertical position. In type B lanterns the discs are placed to the side of the lens and the images on the discs are therefore in a horizontal position.

1. Catalogue of retailer Hermann Bade of Hildesheim



Art.° 4300. Kinematographen zur Projektion von lebenden Bildern.

Alle Apparate sind gleichzeitig auch Laterna-Magica und mit einem indellen reversierend arbeitenden Mechanismus versehen.

D.R.G.M.

Nr.	913.	932½–938½			942½–944		954–956			
	Pol. Glanz-Stahlbl. Rickelbl., Objektiv mit Messing-Rand und seiner Linse, mit Transporteur in Stück Karton.	Pol. Glanzstahlblech, auf Holzbrett montiert, mit guter Petroleum-Lampe und Zylinder. ff. Objektiv mit 3 opt., fein geschliffenen Linsen. Im starken Karton verpackt.			F. pol. Glanzstahlblech, auf gusseis. Untersatz montiert, mit guter Petroleum-Lampe und Zylinder, ff. Objektiv m. 3 opt. fein geschliffenen Linsen. Im starken Karton verpackt.		Hervorragend zu verlässige Kosten-Projektion. Mit vorzügl. opt. Wirkung, surrogat. Filmstreifentransporteuren, mit Bilder-Perforation. Kassette aus feinem Blech, Objektiv fein vorzüglich mit Condensator und fein geschliffenen Objektiven und Reflektor. Mit 6 geschliffenen Objektiv-Linsen.			
Film-streifen	3 runde Filmbilder 9 cm Durchm.	3 Filmstreifen $5^1/_2$ cm breit	3 Filmstreifen 8 cm breit	3 Filmstreifen $8^1/_2$ cm breit	3 Filmstreifen $5^1/_2$ cm breit	3 Filmstreifen 4 cm breit	6 farbige Filmstreifen	8 farbige Filmstreifen.		
Glas-bilder	6 lange Glasbilder 8 cm breit	6 lange Glasbild. $5^1/_2$ cm breit	6 lange Glasbild. 8 cm breit	6 lange Glasbild. $8^1/_2$ cm breit	6 lange Glasbild. $5^1/_2$ cm breit	6 lange Glasbild. 4 cm breit	12 lange Glasbilder			
Brenn.	2" Flachbrenner	2" Flachbrenner	3" Flachbrenner	3" Flachbrenner	2" Flachbrenner	3" Flachbrenner	5" Flachbrenner	10" Kombr.	12" Kombr.	
Stück	1.40	2.25	2.50	4.00	5.25	7.25	6.75	8.25	11.25	14.50

SMALL TYPE A LANTERNS

These are up to 20 cm high (Fig. 2) with gold-coloured feet of pressed sheet metal. The disc-moving mechanism consists of a very primitive 'rack and pinion' movement (Fig. 3) and is placed inside the lantern. The 'rack' part is shaped like a double wing.

2. Small type A lantern

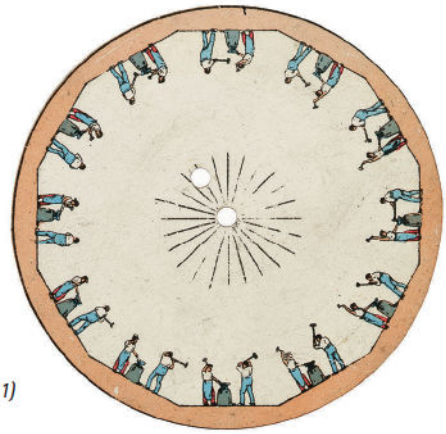
The same mechanism is used in the two larger type A lanterns. The one disc that came with this small lantern has a diameter of about 7.5 cm and shows a dancing couple in nine sequential images around the perimeter (Fig. 4).

3. 'Rack and pinion' movement

4. Disc from small type A lantern

(continued on page 3)

5. Medium-sized type A lantern



6. Lantern box

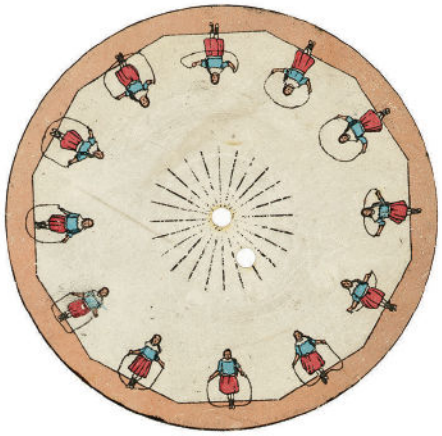
MEDIUM-SIZED TYPE A LANTERNS

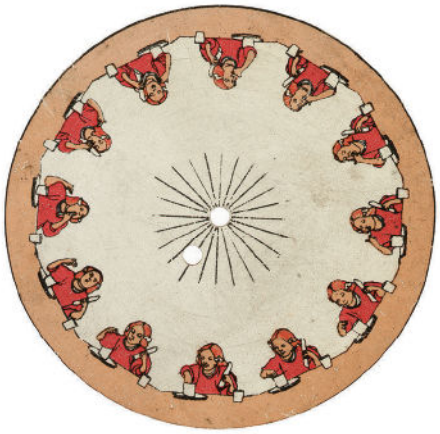
These are around 25 cm high (Fig. 5) with the same type of feet as the smaller ones. The door has the embossed 'D.R.G.M.' mark. The lantern looks similar to the cinematograph shown in the Bade catalogue in Fig.1.

This lantern was found in a box that only shows 'Made in Germany' on the label (Fig. 6) but no further maker's details. 'No. 710/1/6' is stamped on one side of the box.

There are four picture discs with the lantern which show two blacksmiths, a girl skipping, a girl eating and a man performing a trick with a hat (Fig. 7). The picture discs have a diameter of 9 cm and have 12 sequential images around the perimeter.

7. Discs from the medium-sized type A lantern





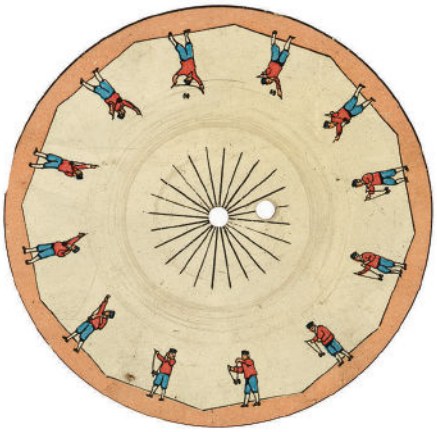
9. Discs from the large type A lantern

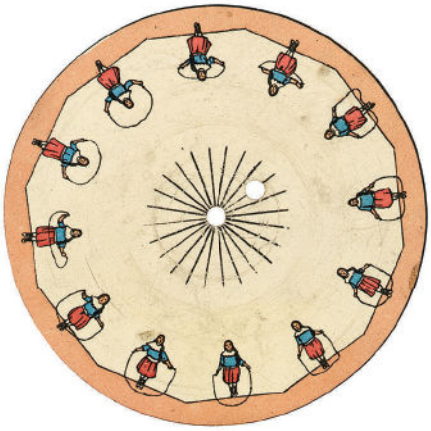
8. Large type A lantern

LARGE TYPE A LANTERNS

This lantern is 28.5 cm high (Fig. 8) and its feet are made of gold-coloured cast metal. The shape of the feet is similar to those on lanterns from George Carette, Johann Falk and Ernst Plank. Although the lantern is larger, the picture discs are much the same size as the previous lantern with a diameter of 9 cm and 12 sequential images. These discs show a boy playing with a diabolo, a girl skipping and a dancing couple (Fig. 9). We already know the dancing couple from Fig. 4 and the skipping girl from Fig. 7.

The disc-moving mechanism of these lanterns works reasonably well. One full turn of the handle moves the picture on twice. The medium-sized and large lanterns work better than the small model because the rack and pinion movement has 12 teeth compared to only 9 on the smallest size.





10. Small type B lantern

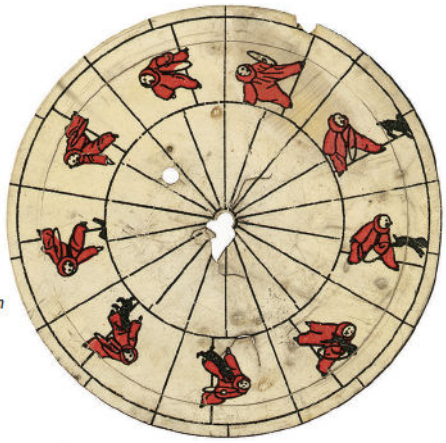
11. Small type B lantern showing rack and pinion

12. Back of lantern

SMALL TYPE B LANTERNS

This lantern is 22.5 cm high (Fig. 10) and again the movement is very simple. As with type A, the rack is a double wing (Fig. 11) but here the wings are longer. The pinion has 9 teeth corresponding with the 9 sequential images around the perimeter of the disc. However, the mechanism is located outside the body of the lantern and the crank handle is at the back. Again a frequency of about two pictures can be achieved with one full turn of the handle. This is the only model with an extra handle for holding the lantern itself (Fig. 12). The letters D.R.G.M. appear on the back of the lantern on a white metal plate that also holds the convex mirror inside.

The disc has a diameter of 8.1 cm and shows a clown with a dog leaping though a hoop (Fig. 13).



13. Disc from the small type B lantern

LARGE TYPE B LANTERN

14. Large type B lantern

15. Front of lantern showing the mechanism

This lantern is 27 cm high and the door has an art nouveau design (Fig. 14) that is found on other German toy magic lanterns from the Nuremberg firm of Fritz Neumeyer (FNN). Neumeyer founded his own firm in Nuremberg on 1 October 1903 and shortly after that took over the 'Spiel- und Metallwarenfabrik Köllisch'. Neumeyer is better known as a very successful manufacturer of motorcycles under the name of Zündapp after 1921.

The mechanism on the lantern shows a rack of four wings like a cross (Fig. 15). The pinion has 12 teeth and the handle is at the back of the lantern, as in the small model. A frequency of four images can be achieved by one full turn of the handle. The letters D.R.G.M. are stamped on the back in the same way as on the previous lantern. The discs have a diameter of 10.3 cm and show 12 sequential images: a man doing a gymnastic exercise, a girl skipping and a man performing a somersault (Fig. 16).

To complete this summary of simple projecting phenakistoscopes we need to mention one other lantern – 'The Little Gem' distributed by MoKo (Moses Kohnstam, Nuremberg). This has already been described by Lester Smith in *Servants of Light*, pp. 86–89 (Magic Lantern Society, 1997).

Operating these projecting phenakistoscopes is not easy. One reason is that the lanterns are small and very light. Therefore it is necessary to hold the body of the lantern firmly with one hand while operating them. The projected moving pictures are poor, even with modern illuminants.

This article mentions all the simple projecting phenakistoscopes that I am aware of at present. Possibly there are additional exciting variants to find. If you have any information on these, please get in touch with the author or *The Magic Lantern*.

16. Discs from the large type B lantern