

AN ANCESTOR OF THE CAROUSEL

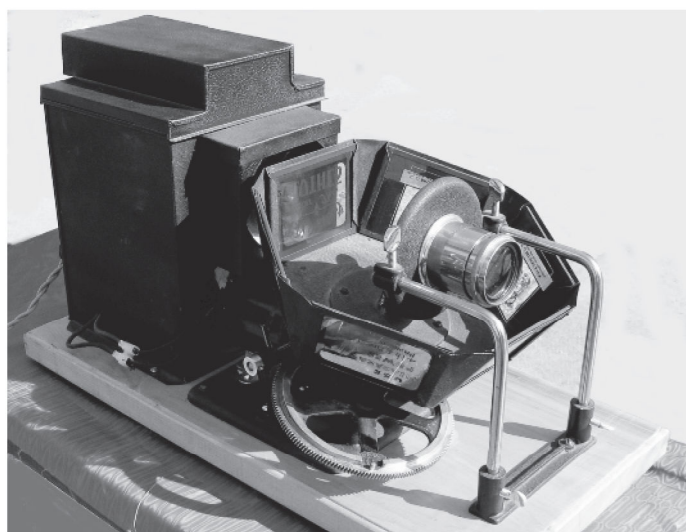
David Evans

OVER THE CENTURIES the magic lantern has metamorphosed into numerous forms for special purposes and uses. One of the most common in recent decades – although in the age of the data projector and PowerPoint presentation software, it is on the verge of becoming an endangered species itself – has been the rotary magazine slide projector, the best-known example of which is the Kodak Carousel projector, which first emerged in 1961. Some would argue, of course, that the Carousel is hardly a magic lantern at all, particularly since it dispensed with the traditional push-and-pull slide carrier in favour of a magazine holding up to 80 slides and dropping them vertically into the beam of its illuminant through a slot in the top of the casing. But apart from that successful design change, all the elements of the seventeenth-century lantern are present, just in a slightly different arrangement; and, moreover, the Carousel does have some interesting ancestors which were much closer to the historic design of the lantern.

The only reference to a carousel-type projector in Hermann Hecht's *Pre-Cinema History* quotes a 1973 article by James Fenton in the *British Journal of Photography*, reporting on a display of 'photographic relics' at the Museum of Transport and Technology in Auckland, New Zealand. One of the exhibits is described thus:

The most unique object among the items in the photographic section is a magic lantern constructed of sheet iron that automatically projected 100 glass slides 3¼in. square, contained in a slotted horizontal drum. ... Powered by a ¼ h.p. electric motor, the heavy magazine (100 slides weigh approximately 10lb) rotated on a central pivot positioning each slide in the projector in sequence. During the changing operation a shutter covered the lens acting as a fading device giving the picture a smooth transfer effect. There is little doubt that this was a prototype and probably the only one of its kind. Although too heavy and cumbersome to have any commercial success it predates our modern carousel projectors by 40 years!'

James Fenton's assumption of '40 years' before the Kodak Carousel would date this remarkable machine to the first two or three decades of the twentieth century. Although ingenious attempts at automatic lanterns with mechanical or electrical slide-changing mechanisms seem to have abounded at the end of the nineteenth century and the start of the twentieth, there are very few surviving examples of actual machines, especially of any that went into production on any scale.



1. David Evans' rotary magazine lantern: the motor-driven 'carousel' moves between the lamp house and the objective lens, which is adjustably supported by the two curved rods.

Another example of a rotary magazine lantern, equally mysterious in its origins and use, came to light some years ago and is illustrated here (Figs 1 and 2). This machine was purchased from a projector

dealer in California, who knew nothing of its origins. It came mounted on a piece of cheap plywood, obviously not original, but from the fixing arrangements it seems almost certain that a wooden baseplate was originally used to support it. The baseplate currently fitted was made in my workshop specially for the purpose.

Built in the United States on a much more modest scale than the 100-slide New Zealand machine, this lantern carries only six standard-format lantern slides (the American standard of 3¼ x 4 inches), and does not have a shutter effect. The 'carousel' is in the shape of a downward-pointing truncated cone and is carried at an angle, so that the slide being projected is parallel to the condenser lens. The objective lens is carried in a pair of brackets above and almost inside the carousel's framework. Intermittent rotation is achieved by a large bronze gear wheel driving a 'Maltese Cross', upon which the carousel itself is mounted. The gear wheel is worm-driven from a small universal electric motor that also drives a fan on the opposite end of its shaft, to provide cooling within the lamp house. The lamp as found was a 250-watt epidiascope-type Edison screw-fitting bulb, which, thanks to the cooling fan, keeps the heating of the slides down to a temperature barely above ambient.



2. The truncated cone of the 'carousel' brings each slide in front of the condenser lens in a vertical position, but then moves the slides below the light beam as it rotates.

The only clue to the maker of this device is engraved upon the brass-bound projection lens barrel: 'Projection Optics Co., Rochester, New York'. No address is given for this company, which is unfortunate as it might have helped to give a more precise dating of the lantern. The company itself is not unknown:

One of the few Rochester companies that has apparently existed by itself and free from any alliances or encumbrances is the Projection Optics Company. It was founded in 1918 by William H. Repp, at 203 State Street, and in 1930 it was moved to its present address at 330 Lyell Avenue. Its principal product is a line of projection lenses for professional motion picture projectors. The company was acquired in the 1960s by Beseler of New York, but it remains a largely autonomous organization to this day, after being in existence for 56 years.'

What was the use of this lantern, which, unlike the New Zealand example, might have enjoyed a modicum of commercial success? The motor-driven rotation of the carousel, without any easy mechanism for putting new slides in, suggests a repetition of the same six images, which would imply some kind of use for advertising in commercial establishments. If the whole lantern is the product of the Projection Optics Company, their connections with 'professional motion picture projectors' might suggest cinema advertising as one of the more likely outlets. But, of course, Projection Optics might have supplied only the lens, and the machine itself may be another prototype – its construction is robust and skilful, but some elements like the pressed and roll-jointed lamp housing somehow suggest that it could be a craft production rather than a mass-produced commercial design, although the carousel and motor drive arrangements are mounted upon a cast-iron base.

I have come across only this one example so far, and have never seen a similar device advertised anywhere. Perhaps someone else has seen, heard of or acquired another example, or a related machine, or can anyone shed some additional light on this intriguing projector?

David EVANS is a collector of magic lanterns and slides of some 30 years' standing. His interests extend to most aspects of the subject, but he especially likes oddities. He is a regular contributor to the *Journal of the Magic Lantern Society of the USA and Canada*.

NOTES

1. James Fenton, 'Preserving New Zealand's Photographic History', *British Journal of Photography* March 1973, 196-7, cited in Hermann Hecht (ed. Ann Hecht), *Pre-Cinema History: An Encyclopaedia and Annotated Bibliography of the Moving Image Before 1896* (London: Bowker Saur, 1993), item 767.
2. Rudolf Kingslake, *The Rochester Camera and Lens Companies* (Rochester, NY: Photographic Historical Society, 1974). See (web address correct at time of going to press) <http://www.nwmangum.com/Kodak/Rochester.html>.