

THE MAGIC LANTERN MAKERS OF FRANCE

LAURENT MANNONI

Translated from the French by David Robinson

Part 1 : The Seventeenth and Eighteenth Centuries

In France, at the end of the seventeenth century, the magic lantern was primarily an instrument of physics, used by some scientists in their laboratories. But it was already also a means of amusement, reserved for the privileged social classes. Louis XIV himself was present at public projections in May 1656.

These lanterns were manufactured by opticians and craftsmen, whose memory and names are unhappily now forgotten.

In the eighteenth century, the magic lantern enjoyed a great vogue in France. This curious box of wood and hammered iron was to become accessible to all, thanks to the magic lantern showmen, who from 1720 roamed the roads of France, carrying their lanterns on their backs.

Thus, for a few sous, the common people could gaze at the mysterious circle of light in which appeared images religious, trivial or satanic. But the great folk of the day also continued to amuse themselves: around 1730, Philippe d'Orléans organised projections for a group of friends.

About 1740 Voltaire, at his estate of Cirey, proved himself an excellent commentator but a pitiful lanternist, according to the evidence of Madame de Graffigny:

After supper he showed us the magic lantern and made us die with laughter. . . no, it was not really so funny. But by interfering with the *goupillon* of the lantern, which was filled with spirits of wine, he spilt it on his hand, fire broke out and everything was in flames. Ah! you should have seen how beautiful it was, but what was not so fine was that his hand was burned. It somewhat disturbed the entertainment, which he resumed a moment later.

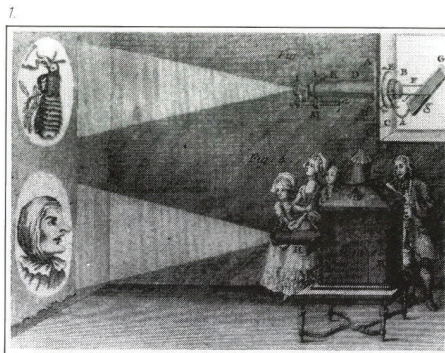
Such goings-on would not have pleased the Abbé Nollet (1700–1770). This great savant wished that the magic lantern should be useful and not futile; that it should serve for education and not amusement. He wrote in 1764:

The magic lantern is one of those instruments which too great popularity has almost made ridiculous in the eyes of many people. It is promenaded in the streets, and used to amuse children and common folk.

In the eighteenth century then there was a strong demand for magic lanterns on the part of private people. And the Paris opticians, who had existed in the capital since the thirteenth century, made and sold these instruments. These eighteenth-century opticians must therefore be regarded as the first manufacturers of lanterns in multiple

production, even if they were made by craftsmen and in small numbers.

Figure 1 illustrates a show of about 1750. Note the great size of the lantern. Above it is a solar microscope, an instrument invented some ten years earlier by Lieberkühn in Germany, and which Jean-Paul Marat, the future revolutionary, in about 1779 commended for the instruction of the people.



Among the opticians who supplied the amateurs of projection may be cited the optical engineer Letellier, who offered in his shop 'At the Sign of the Microscope', quai des Augustins, in Paris, camera obscuras, burning mirrors, telescopes and magic lanterns. Did Letellier construct the lanterns himself, or did he order them from a workshop or a colleague? We do not know.

Still among the opticians, we find a true magic lantern maker in 1786. He is almost entirely forgotten today, and yet he deserves to be placed alongside Molteni or Lapiere. His name was L'Aisé. He was fascinated by 'the curious object invented by Father Kircker' (sic). His shop was called 'At the Ville de Bauvais' and was at 35 quai des Orfèvres, Paris. There L'Aisé sold 'all that concerns optics and curiosities in general... l'Optique, Dioptrique, Catadioptrique, et Perspective Curieuse'. No doubt after having read the Abbé Nollet's *Leçons de Physique Expérimentale* (1755), L'Aisé made in his workshop lanterns of the typical eighteenth-century style. Figure 2 shows three lanterns of this period. L'Aisé's instruments functioned with olive oil. The operation, on account of the feeble light, was delicate: but with a little care, as he wrote in 1787, 'it is possible to obtain all the clarity, magnification and illusion which this instrument can produce'.

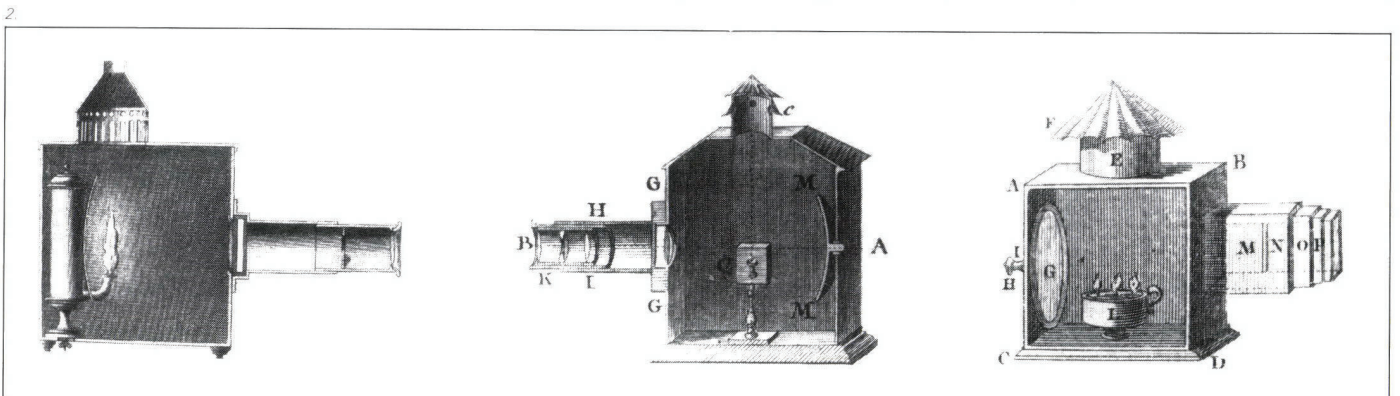
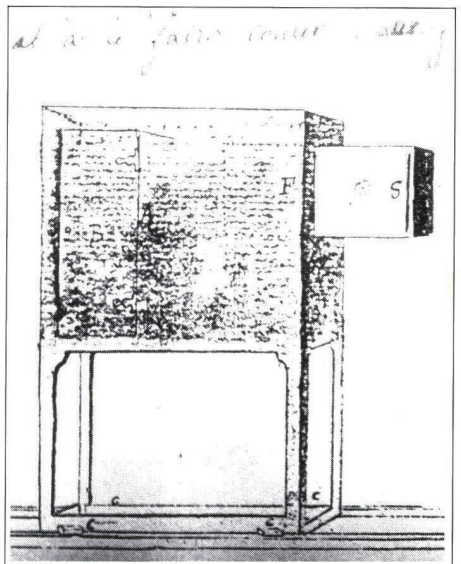
The forms of the French lantern of this period scarcely varied. The large models like figure 1 were

relatively rare. A text dating from 1799 says that lanterns are 'ordinarily seven to eight *pouces* high and six in length and five in breadth'. One *pouce* being about 2.7cm, this is approximately 20cm x 16cm x 13cm — which is quite small. They were made of wood or iron. The optics were rudimentary and the illumination faint.

But one man was to revolutionise the form, technique and manufacture of magic lanterns. Etienne Gaspard Robert, known as Robertson (1763–1837) was born at Liège in Belgium, but was living in Paris, at 24 rue de Provence, when, on the 27 ventôse of year VII (17 March 1799) he patented a device which he had invented and had already been using since March 1798. It was described as a 'fantascope, or perfection of the lantern of Kircher'. It was while seeking 'a mechanism applicable to the manipulation of Buffon's mirrors' that Robertson had the idea, as he writes in his patent specification, of 'rendering useful an instrument of physics which, until now, has appeared only as a useless piece of furniture in the laboratory of the physicist.'

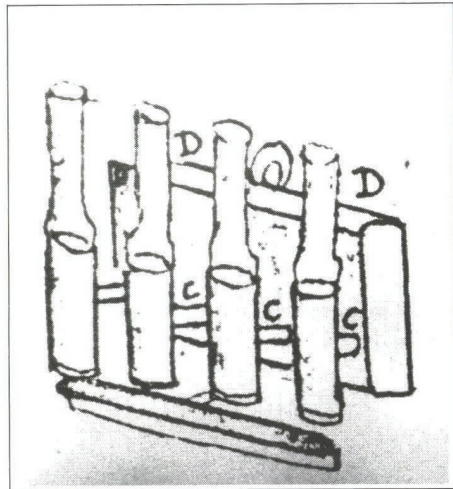
In France there is a certain confusion about the exact form of Robertson's lantern. Some researchers describe it as being equipped with an eccentric fixed to the wheels and linked by a gear to the lens. For my own part, I prefer to rely on Robertson's patent and his *Mémoires*.

In his patent, Citizen Robert writes that the fantascope is made of walnut; it is mounted on four feet which run on rails. The lens is provided with a handle to adjust the focus. At the end of the lens, shutters serve to allow 'more or less light, as the image requires'. But the fantascope is not only a perfected magic lantern, it is also a 'megascopé' as figure 3 illustrates. That is to say that Robertson could project 'opaque bodies', such as little death's heads. The physicist Jacques Alexandre César Charles (1746–1823) used the megascopé before Robertson, in 1780, in his laboratory in the Louvre.



Robertson also pioneered the use of very powerful illumination. In his patent we see an Argand lamp with four burners and a single oil reservoir (figure 4). Behind it was a reflector. Another novelty: the lenses did not distort the images, but were achromatic, apparently ground by Dollond. The slides were painted in Berlin by specialists.

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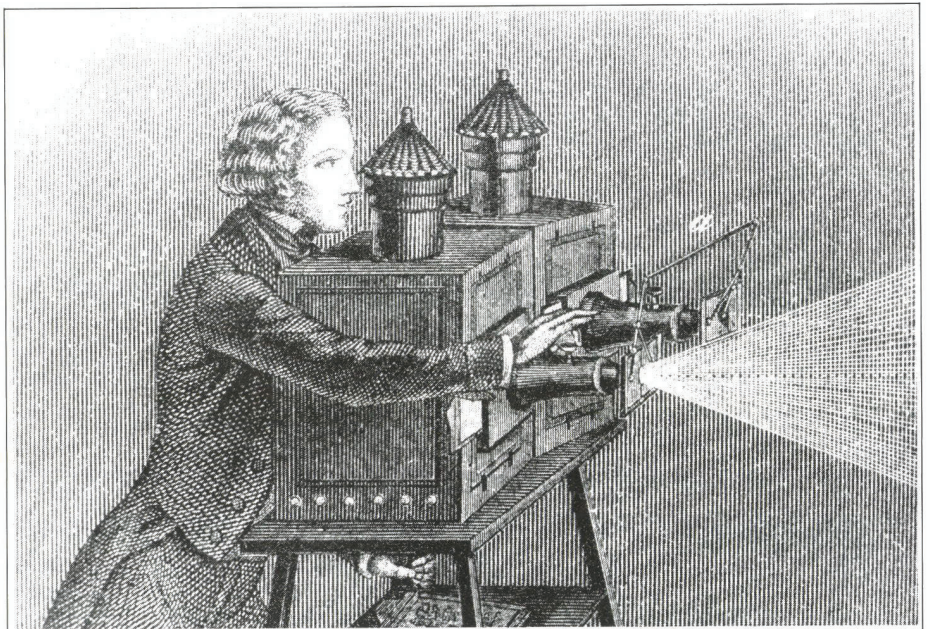
Who was the maker of this remarkable instrument, which attracted great crowds to the Pavillon de l'Echiquier and to the Couvent des Capucines, which struck the imagination of Chateaubriand and Stendhal, and set off an unprecedented vogue for 'fantasmagories' as far afield as Russia? Some researchers (Coissac, Remise) put forward the name of Molteni. I agree, because the Molteni specialised for a long time in fantasmagoria lanterns. Their firm began about 1782. It was originally directed by Jules Molteni and his brother. Situated at 7 rue du Coq Saint Honoré, they produced and sold optical, mathematical and nautical instruments.

At the end of the eighteenth century in France, the magic lantern enjoyed a favour which was not to be equalled until 1840. In 1792 this marvellous optical instrument passed into the treasury of French proverbs, thanks to the fabulist Jean-Pierre Claris de Florian (1755-1794): 'He had forgotten only one thing — which was to light his lantern', (*The Monkey who shows the Magic Lantern*, figure 5).

Yet, some years later, in 1798, Robertson would project a whole procession of monsters, winged death's-heads, and even the grinning spectre of Marat, recently stabbed to death by Charlotte Corday.

These were all the contrasts of the age.

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Part 2 : The Nineteenth Century

Robertson's patent, which had until 17 March 1804 to run, did not serve to protect his invention, for from 1800 we find 'ghost machines' being made and sold in Paris by the brothers Dumortiez and Molteni.

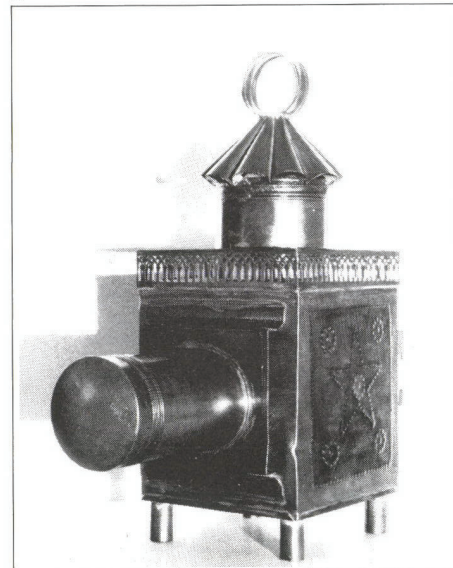
Under Louis XVIII we find among the plagiarists of Robertson the physicist Comte, who offered spectacles of 'Fantasmagoria, Ventriloquia and Physics' to the Allied Sovereigns during the Bourbon Restoration. His theatre lasted from 1814 to 1850.

At the start of the nineteenth century, 'the least amateur of physics, in every country, had his fantasmagoria', Robertson wrote bitterly in 1831.

The first 1800-1840 offers, to my knowledge, very few new names of manufacturers. Jules Molteni remained during the whole period the greatest lantern maker in France. The firm's output ranged from lanterns in polished white iron, with Argand lamp and lens with rack and pinion, to the double lantern of about 1850 for dissolving views (shown in figure 6). In the factory on rue Coq Saint Honoré there was also at work Alphonse Giroux, specialist and dealer in phenakistoscopes. In 1846 the firm of Molteni moved to 44 rue du Château d'Eau, where it remained until its closure.

A new manufacturer appeared about 1810: the optician François Soleil. Born in 1778, Soleil was

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a great constructor of optical and physical apparatus, who worked for Fresnel, Foucault and Arago. In 1812 Soleil was at 1 rue des Filles Saint Thomas. At this period he made improvements to the classic camera obscura by adding a prism, and naming it 'camera obscura called propiographie'. In 1838 the Abbé Moigno, whom we shall speak of later, bought lanterns from him for his first educational projections.

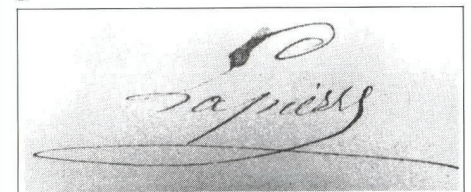
Until 1843 there were scarcely any makers of 'lanternes jouets', cheap lanterns for children. The first was undoubtedly Auguste Lapiere. We owe the history of the firm of Lapiere to Monsieur Jac Remier, who was fortunate in 1961 to discover René Lapiere, who, with his brother Maurice, was the last of the line.

In 1843 Auguste Lapiere, a tinsmith from Normandy, decided to make magic lanterns. Installed in a workshop in rue Saint Paxent, he supplied the toyshops of Paris with lanterns that were quite rudimentary in the matter of optics and illumination, but attractive because of their lively colours (with alcohol varnish) and their very low price. Figure 7 shows a Lapiere 'Square Lantern'. Its tubular feet reveal that it was made between 1843 and 1860, for in March 1860, Auguste Lapiere wrote:

Today there are many portable magic lanterns in white iron in the drawing rooms, which provide agreeable entertainments for the long winter evenings. Until now, the four feet of these magic lanterns were... little cylinders of white iron... I decided that it would be possible to make them differently and more elegant, and to this purpose I made matrixes to beat out ornamental feet in brass, zinc or white iron....

Figure 8 shows the signature of Auguste Lapiere.

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At the time, these lanterns 'à quatre sous' were often scorned by comparison with the sophisticated apparatus of Duboscq or Molteni. An anonymous author wrote in 1877:

Magic lanterns are sold commonly and in great numbers, in the toy trade. They have brought down

the price at the cost of losing their power. The white iron, stamped and coloured, makes up not only the body but also the tubes that contain the lenses. . . . The lenses are of simple moulded glass which is always greenish and full of faults.

The criticism is justified, but it must not be forgotten that these lanterns were very popular and brought more and more renown to the device.

The home shows, made with the brightly- coloured Lapierre lanterns, delighted children. Figure 9 shows two family performances of about 1860. The grown-ups were also delighted: in 1867 the journalist Eugène Chavette was accustomed to give a dinner every Thursday for his press colleagues, one of whom was Henri Rochefort. At dessert, Rochefort recalled, Chavette brought out a magic lantern and showed views whose impropriety 'defied all reminiscence and all description'.

It seems that Lapierre had always had rivals, but none of them had much effect at the start. In 1844 there was a small maker and dealer in slides (*La Conquête d'Afrique, Diableries*) called Lefranc, at 11 rue des Batignollaises, at Batignolles. Perhaps he also made magic lanterns?

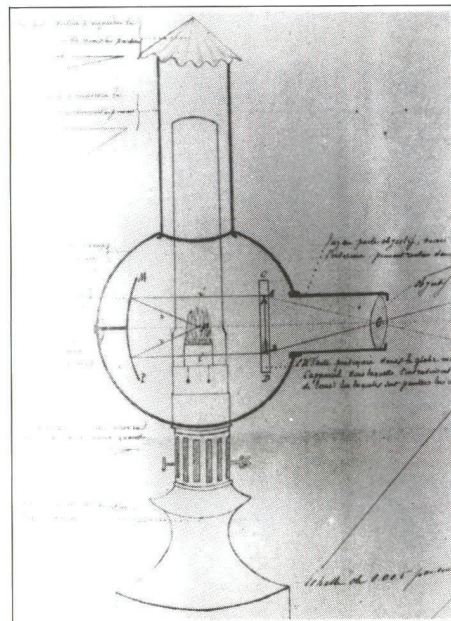
Lapierre's principal rival, Aubert, appeared around 1860. Curiously, so far we know practically nothing of this marvellous maker. It is he who produced the famous Buddha Lantern and the Eiffel Tower Lantern. In 1870 he had a shop in the district of toy makers, at 3 rue Pastourel.

Also around 1860 we find a maker of lampscopes at 14 rue de la Victoire. The lampscope is a magic lantern which is simply placed on an oil lamp; Marcel Proust used one in his childhood. The maker

was Henri-Alexandre Lefèvre. He called himself in fact a 'civil engineer', but he certainly made lampscopes, no doubt in small number. Lefèvre claimed to have been the inventor of the *Lampadoscope* in March 1861 (figure 10 shows the apparatus). It is questionable if he really invented the lampscope or *Lampadoscope*, since Ernst Hrabalek's book *Laterna Magica* (1985) illustrates a superb lampscope dating from 1820. But Lefèvre was an enthusiast of the lampscope for almost twenty years, and he is certainly the inventor of a lampscope comprising a carrier with twelve slides which turned around the globe of the lantern. In my view this is a precursor of John Arthur Roebuck Rudge's lantern. Lefèvre's lanterns are in metal: a powerful elliptical reflector is placed behind the flame. In November 1876, Lefèvre perfected his lampscope, which became a 'bi-lampadaire, serving as a camera obscura and a magic lantern'. In this, two lamps were surmounted by a single lantern, which used an arrangement of mirrors inside. This device was effectively realised.

About 1868 it seems that L. Saussine, successor to H. Duru, made lanterns. He was a toy manufacturer at 10 rue du Cloître Saint Jacques, who produced shadow theatres. The Musée de Poissy possesses an invoice made out by Saussine, on which appear the words 'magic lanterns'.

In 1878 Lefèvre directed his researches to the megascope. He invented an apparatus to obtain 'scenic effects', but which was also used for 'nocturnal publicity'. This was not a new idea: from 1868 Léon Lefebvre-Durufilé, of rue Vaugirard, fixed magic lanterns in the streets and projected publicity images for any traders who wanted it. The images formed, on the pavement or the walls, 'a



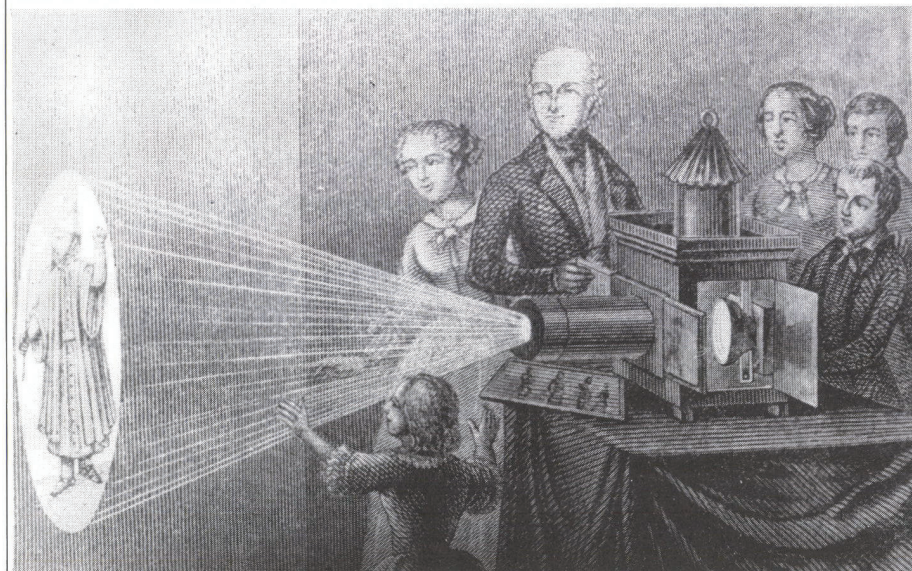
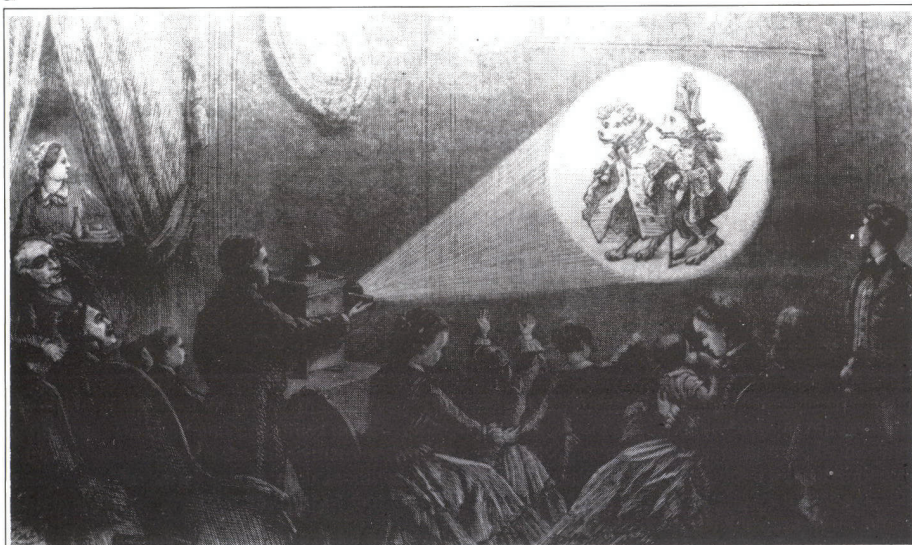
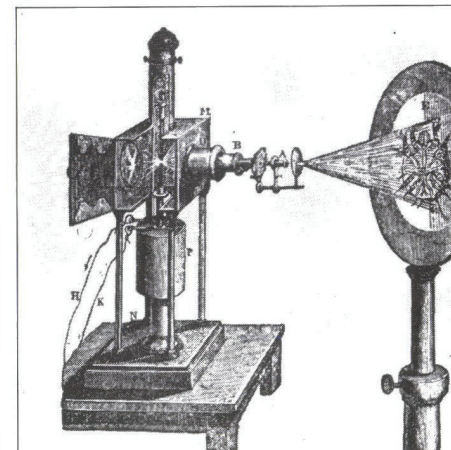
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most picturesque and varied mosaic'. The lampscope was constructed equally by Lapierre and Aubert. The principle of the bi-lampadaire was taken up around 1880 by Delegrave, a Parisian manufacturer of whom we know very little.

Turning to the market in projection lanterns for educational and scientific purposes brings us back first of all to Soleil. About 1849 Louis Jules Duboscq (1822-1894) became the son-in-law and associate of François Soleil. According to the Abbé Moigno, Duboscq was a very intelligent man of indefatigable enthusiasm. Very quickly Duboscq, François Soleil and his son showed themselves to be very inventive. From the optical instruments shop at 21 rue de l'Odéon came numerous devices — for example, in 1852 a 'stéréoscope-fantascope or Bioscope'. This was in fact a projecting-phenakistiscope. About 1870 Duboscq constructed an 'electric projecting microscope' (figure 11). In 1872, in collaboration with the Abbé Moigno, he created a lantern to project luminous spectres. Finally, Duboscq sought different means of illuminating lanterns (electricity, arc light), and published slides for lanterns and for the stereoscope, which he was the first to make and market in France.

It is important to emphasise the important role played by the Abbé Moigno, who inspired many manufacturers. Abbé François Napoléon Marie Moigno (1804-1884) carried on an unremitting struggle to ensure the use of projection for scientific and educational purposes in France, in the same way as the lantern was already used for teaching in England, Germany and Belgium. In 1872 he opened a projection room in Paris. Despite numerous setbacks, his efforts were rewarded: later we shall see how the lantern was used for religious education.

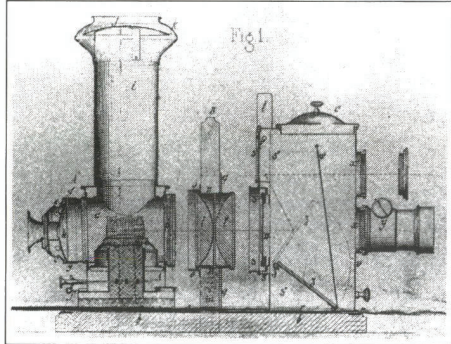
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The period 1870–1900 is very rich in new manufacturers. Leaving Paris for Rennes (Ille-et-Vilaine) we find Jacques Désiré Fenaut in 1877 making a solar lantern with opaque objects. He describes himself as a dealer: it is possible therefore that he marketed this lantern.

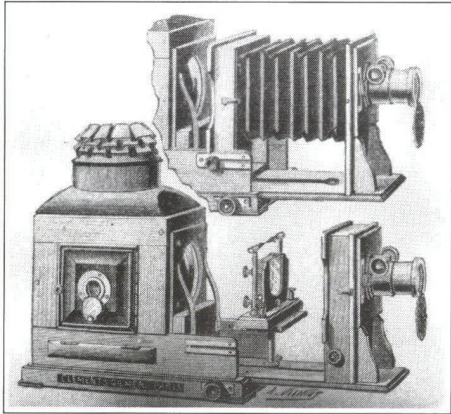
In 1883 Henri-François Coulon brought out a magic lantern which he called 'La Petite Parisienne', which was both magic lantern and megascope (figure 12).

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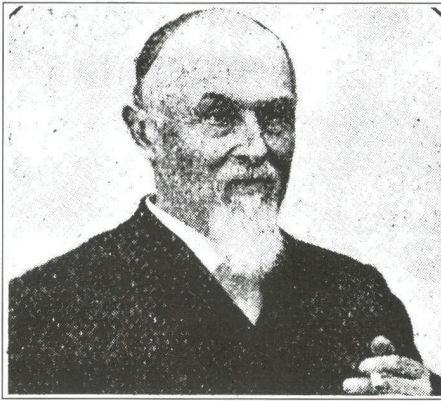
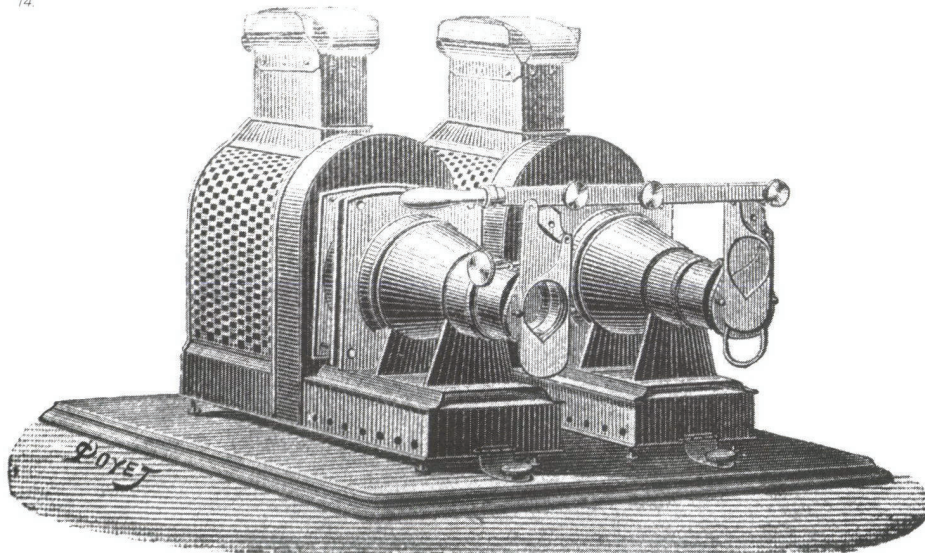
About 1870, I believe, there appeared the firm of Clément et Gilmer, which specialised in scientific lanterns such as that shown in figure 13.

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At the same time there also appeared in the market A. Laverne, who had a shop at 8 and 10 rue de Malte in Paris. This great manufacturer is somewhat forgotten, yet he produced three fine lanterns, in different sizes: around 1870 he launched the 'Universal Lantern', which was a portable model for lectures. He also made polyoramas, vertical and horizontal, with dissolving views (see figure 14). Laverne also supplied slides, tubes and everything for the complete lanternist. He became the principal supplier to the Ligue de l'Enseignement (League for Teaching), founded in 1866.

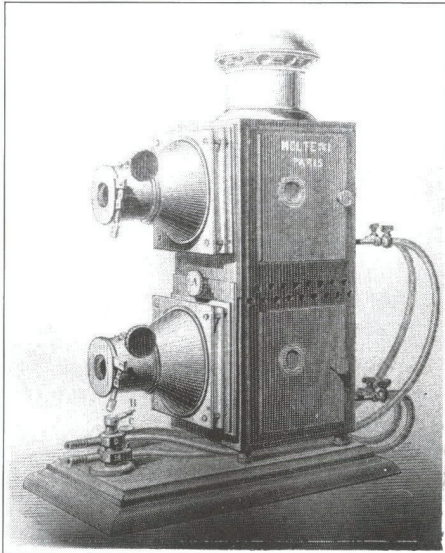
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Returning to the 'classics', the direction of the firm of Molteni passed in 1872 to Alfred Molteni (figure 15), the nephew of Jules. He took the title 'Molteni, projection-made man'! From the workshops at 44 rue du Château d'Eau came powerful and very practical lanterns, combining excellent gas illumination with good lenses. Figure 16 shows a double Molteni lantern. The firm also produced fixed and animated slides. The 1884 Molteni catalogue lists more than 8,000 titles of slides. Molteni also introduced the Choreutoscope slide into France in 1882.

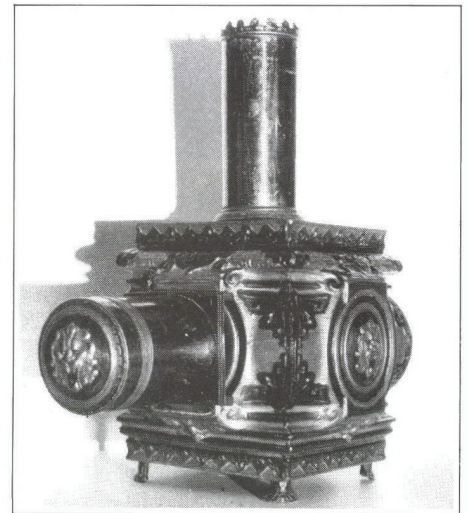
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In 1875 the eldest son of Auguste Lapierre, Edouard, took over the firm. Under his reign new models were produced, among them the luxurious and much admired *Lampadaphore*, two examples of which are shown in figure 17. This is a kind of lampascope, sold directly with its own oil lamp. It

is all in nickered brass. In 1886 Edouard wanted to add a carrier for glass discs, but I do not know if the model actually came out. In 1883 the Lapierrés opened a shop at 25 rue Pastourelle. Figure 18 shows what I regard as the finest of the Lapierre models, the 'Square lampascope'. About 1870 Lapierre brought an action for counterfeiting against a rival called Boulanger, but nothing is known about this maker.

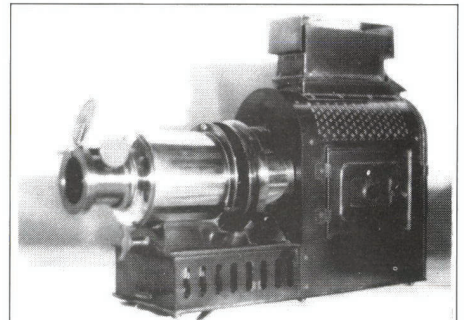
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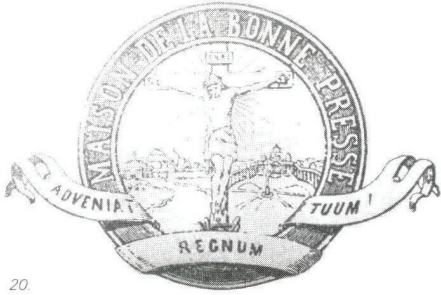


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Still around 1870, the firm Mazo appeared. Elie Xavier Mazo was a very great maker of lanterns at the end of the century. He and his associate Alexandre Sallé created and sold very elaborate models. Figure 19 shows a Mazo lantern of about 1890. The lanterns of this firm are very powerful, some capable of projecting over more than 50 metres. The Mazo establishment at 10 boulevard Magenta in Paris sold slides, manuals and materials. With a passion for the techniques of projection, Elie Mazo began research on the Cinématographe in 1895; later he studied incandescent lamps, and the projection of autochrome slides, invented by the Lumière brothers. He was associated about 1910 with another researcher J. B. Tauleigne.

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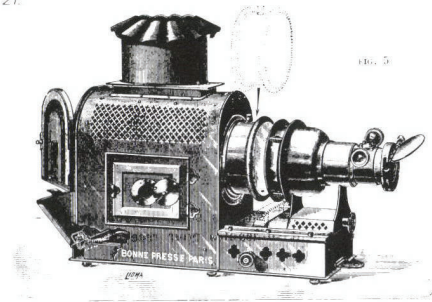




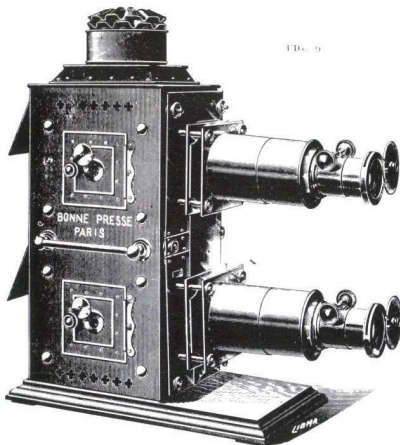
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The ideas of the Abbé Moigno were finally applied with success by a great religious organisation, the Maison de la Bonne Presse (figure 20), established at 5 rue Bayard, which decided about 1880 to establish a service for religious and instructive projections. The service was entrusted to Georges-Michel Coissac, a great specialist in magic lanterns, the author of manuals of projection and of a *Histoire du Cinématographe* which appeared in 1925. The mission of la Bonne Presse was to struggle against licentious literature, the true 'plague'... inoculated into souls', by replacing it with 'wholesome readings'. The projections had much the same end, adding scientific to moral education. Throughout France, la Bonne Presse lent out lanterns, single (figure 21) or double (figure 22).

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So we arrive at the end of the nineteenth century. This was the apotheosis of Edouard Lapierre, who installed himself at 38 quai Jemmapes, and in 1900 constructed a steam factory for magic lanterns at Lagny (Seine-et-Marne).

A new manufacturer appeared in Lyon around 1880. No one today cites them, and it is true that little is known about the firm; yet the projection lanterns *l'Etoile* are remarkable. The model shown in figure 23 is astonishing, because its normal length can be doubled by means of a system of iron tubes. There is also an ingenious portable model, which appears in the form of a simple black box. A door in the front opens to reveal the lens, running on rails. This firm, specialising in lecture lanterns, was at 12 rue Sainte Hélène and, either earlier or later, at 7 place Ampère, Lyon.

Part 3: 1900 and beyond

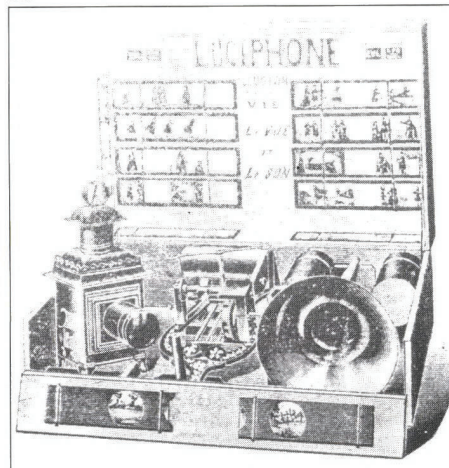
In 1900 the cinematograph swept through the fairgrounds, and soon also through the Parisian salons.

In 1913 Charles Pathé (1863–1957), the great cinema magnate, launched the *Pathé-Kok*, a small projector using films of 28mm width, and made by the firm of Continsouza. Pathé described it as 'the most delightful distraction, without danger, without installation, without need for experience'. In 1922 he launched the *Pathé-Baby*, with 9.5mm film, which was to have enormous success. These projectors, very easy to handle and offering 'thousands of views', progressively ousted the magic lantern.

From 1904 the catalogues of the Parisian toyshops include 'cinematographs... that can be used like magic lanterns', and which were sold with chromolithographed films which passed through the apparatus in a loop. Lapierre manufactured such toys.

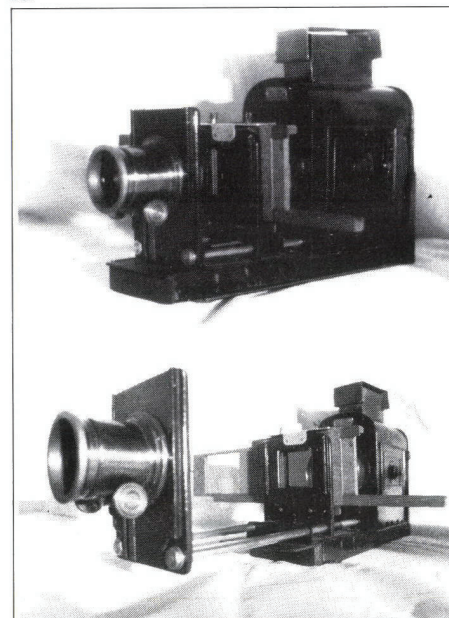
Edouard Lapierre retired in 1901, leaving the factory at Lagny to his two sons René and Maurice. In 1903 the two brothers launched the *Luciphone*, 'phonograph and magic lantern combined, the views illustrating the airs on the cylinders'. In 1904 this *Luciphone*, giving 'the illusion of life', figured in the catalogue of the Grand Bazar de l'Hotel de Ville (figure 24).

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In 1908 the two Lapierre brothers went into business with Jules Demaria, an important manufacturer of photographic apparatus and binoculars, at 2 rue du Canal Saint Martin. In 1921 the firm Demaria-Lapierre was at 169 quai de Valmy. An

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advertisement of that date indicates that they were still selling projectors and enlargers. In partnership they built camera bodies, then the Lapierrés moved into the field of amateur cinema projectors.

In 1907 the great Alfred Molteni died in Tours. He had sold the firm and production, probably in 1900, to the Etablissements Radiguet et Massiot; G. Massiot was successor to Radiguet. He went on to exploit the models invented by Molteni, and was associated with the English firm of York and Son; but Massiot also invented his own lanterns. In 1921 he offered 'an automatic projection lantern, with remote control, permitting the lecturer, whilst remaining in position, to change at will the slides which are prearranged in order in a magazine'. Massiot was a major producer of lanterns intended for teaching purposes; and also made cinema projectors. In 1925 his shop was at 13 and 15 boulevard des Filles du Calvaire, and his workshops in Courbevoie. He was concerned, as he wrote in 1925, with projections 'in their most extended applications: multiprojector, diascope, episcope, microprojection'.

Jules Duboscq died in 1894. The firm was taken over by the brothers Pellin, manufacturers of the same type as Massiot.

The period 1900–1930 produced still more new manufacturers, but these were no longer specialists in projection lanterns: their attention was taken up with the cinema. Even so, some firms continued to produce projection lanterns for education and lecture purposes.

In 1900 Léon Gaumont, like Pathé a major film producer, put on the market an apparatus which could show either 35mm film or lantern slides. Often advertising slides would be introduced between films. I have a very amusing photographic slide of this kind for a 'Pérolin pulverisator'... as used at the Palais de l'Elysée'.

Around 1920 the Etablissements Delmau, of 21 faubourg du Temple, offered projectors for teaching purposes. Also, the Etablissements Mollier at 40 rue de Vignon produced 'apparatus for fixed projections'.

Finally we must note the firm of Aubert — though not the mysterious manufacturer of the Buddha lantern. This was rather Louis Aubert (1879–1944) who was a film producer like Gaumont and Pathé. In the twenties he announced 'a little invention of big value', the 'Aubert transparency, for the projection of views on glass with the aid of horizontal mirror arc'.

For a long period the cinema still kept the memory and nostalgia of its mother, the magic lantern, to whom Georges Méliès dedicated a film in 1907. But after 1920, as the cinema became more and more complex, with its own language, the popular magic lantern began its long sleep in the attics. And if we waken it again today, it is because its poetry has never been replaced.

March 1986

