

PAUL AND ACRES

Colin Fryer

FOR REASONS BEST KNOWN TO HIMSELF – probably because he regarded his new peepshow machine as a trivial amusement that would quickly pass out of fashion – the famous American inventor, Thomas Alva Edison (1847–1931) did not patent the Kinetoscope in Great Britain or the rest of Europe, a miscalculation that he soon regretted. This was originally noted by two Greek entrepreneurs, Georgiades and Tragides, who instructed a London scientific instrument maker, late in 1894, to make some replicas. The instrument maker was 25-year-old Robert William Paul (1869–1943), who had his own workshop at 44 Hatton Garden. After completing his client's order, Paul quickly decided to make his own version of it, which found a brisk market in France as well as in the UK. The Frenchman, Charles Pathé, was one of his first customers.

The only films available however were controlled by Edison's agents, Maguire and Baucus (later called the Warwick Trading Company), who refused him further supplies. This meant he had to make his own if his business was to succeed. It also required the building of a moving picture camera.

Before starting his own business in Hatton Garden, Paul had been employed by Elliott Brothers in the Strand, who made electrical instruments. One of his friends, who still worked there, Henry Short, suggested that Birt Acres (1854–1918) an American of English parents, who was Elliott's manager of their 'Dry Plate' works at Barnet, might help with the necessary photographic knowledge required to design such a camera.

The two met on 4 February 1895 and went into partnership. Rapid progress was made and a workable camera, now known as the Paul-Acres camera, perfected, although in later years Paul claimed to have designed and built it by himself. By the end of March the first English film had been shot outside Acres's home at Clovelly Cottage in Barnet, and featured Henry Short. Commercial production began the following day when the pair went to Putney to film the Oxford and Cambridge Boat Race – or at least the 10 seconds or so that they could get on to the 50 feet of film their camera held. This was the birth of British cinematography and the world's first film of a news event.

By the beginning of June several simple comic, dramatic and actuality subjects had been filmed by Acres, including 'The Arrest of a Pickpocket', 'Comic Shoe Black', 'Boxing Kangaroo', 'Performing Bears', 'Boxing Match', 'Carpenter's Shop', 'Dancing Girls', 'Rough Sea at Dover' and the 1895 'Derby'. A photograph of Acres filming this event shows that the camera used was relatively portable.

These films were shown for the first time throughout the summer in the Empire of India Exhibition, Earl's Court, where Paul had installed a number of his Kinetoscopes. The charge was two pence a film. A number of films were exported, particularly to Germany and the United States. In fact the 'Rough Sea' film found its way onto the programme of Edison films shown at the Koster and Bial's Music Hall, New York City (see *Newsletter* 107). Acres resigned his position at Elliott's and went to Germany to film the opening of the Kiel Canal. While he was away Paul began to advertise himself as 'Sole European Manufacturer' of the films. Acres objected to this and an almighty row blew up and the partnership dissolved 'in acrimony and mutual recriminations'.

On 24 October 1895 Paul registered the idea of using moving pictures to tell a story, although the project fell through because of lack of finance. Paul and Acres now turned their attention, independently, to the projection of Kinetoscope films on a screen. The continuously moving film, momentarily illuminated, used in the

peepshow could not be modified for projection. Instead it was necessary to move the film intermittently in front of a lantern. Acres designed a projector which achieved this by a mechanism known as 'dog' motion. He gave a public demonstration to members of the Lyonsdown Photographic Club on Friday 10 January 1896. He gave another performance to members of the Royal Photographic Society at 12 Hanover Square, London, four days later.

Paul's projector achieved the intermittent motion by means of two seven-star Maltese crosses, also late 1895. He called his apparatus 'Theatrograph' and gave the initial demonstration before an invited audience at Finsbury Technical College, where he used to attend as a boy, on 21 February 1896, the same day as the London premiere of the Lumiere brothers' 'Cinématographe' at the Royal Polytechnic Institute, Regent's Street – today part of the University of Westminster. *The English Mechanic* published details of Paul's projector the next day.

Another demonstration of the 'Theatrograph' was given at the Royal Institution on 28 February. On 19 March Paul gave the first performance before the general public at the Egyptian Hall, Piccadilly. Two days later he started a short but successful run of public shows at the Olympia Theatre. Acres on the same day (21 March) also began commercial performances of the Kineopticon at 2 Piccadilly Mansions, London. Admission was six pence and the films were shown from 2.00pm to 6.00pm and from 7.30pm to 10.00 pm. But this didn't last long and he sold most of his films to other photographic exhibitors, although he did give occasional lectures to scientific and photographic societies. Acres eventually went bankrupt, first in 1909 and then in 1911.

Meanwhile Paul moved his 'Theatrograph' to the Alhambra Theatre, in Leicester Square (the Odeon Cinema stands there now), where it stayed for four years and whose manager renamed it the 'Animatographe'. Paul was thus the first Englishman to show films to a public audience paying an admission fee. In July a programme of Paul's films was given at the Pandora Gallery (now the Victoria Hall, King's Road), Brighton, for the summer season. Each day started at 11.30am and ran to 10.30pm. Admission was sixpence (2.5 pence), reserved seats one shilling (5p). Paul later came down to Brighton to shoot a film about a small boat landing on Brighton beach, 'with comic incidents'. Production versions of this projector were also used by other showmen at the Empire Theatre, Newport, on 2 November 1896 and at the Assembly Rooms, Cheltenham, one month later, as well as elsewhere, both home and abroad. Subsequently Paul brought out improved versions in which the intermittent movement consisted of a Maltese cross or four-sided starwheel (1897) and then one with only slots (1899).

In 1896 Paul also returned to the idea of using moving pictures to tell a story, this time a little comedy called 'A Soldier's Courtship'. Filming took place on the roof of the Alhambra Theatre and featured his wife, Ellen, as the interloper. It became so popular that he made a sequel and then built a special film studio – the first in Europe – at Muswell Hill, North London. It had a glass roof and sliding doors and was equipped with extremely ingenious trick effects. Adjacent was a laboratory capable of processing up to 8,000 feet of film per day.

The projector that Paul used at the Alhambra is now in the Science Museum. Unfortunately the optical system has been replaced, so it is doubtful whether the badly chipped Petzval lens at present loosely mounted in it is the original. This has a diameter of 1¼in and a focal length of 3in.

After dominating the home market for many years, Paul retired from film production in 1910. His business was bought by Cambridge Scientific Instruments Ltd in 1920. Thereafter he achieved distinction in the world of science, and invented the iron lung for victims of poliomyelitis. He died, aged 74, on 28 March 1943.

EDITOR'S NOTE: Earlier this year we heard the sad news that Colin Fryer passed away on Christmas Eve last year. As we had this article on the books ready for use in a publication, with permission from the family we decided to publish it.

Colin wrote a number of articles for the Society over the years, and they always looked at things from a different perspective. We have Colin to thank for raising a number of issues, for example the possibility that Chaucer described a lantern show, and the only article we have that describes the history of magic lantern projection lenses.

This article follows in the same tradition. By highlighting the fact that Birt Acres was the manager of the Elliott dry plate works in Barnet, the similarity between the two teams working on each side of the English Channel becomes obvious, and yet has never to my knowledge been raised before. In England

the manager of a dry plate works (Acres) was working with a clever engineer (Paul). In France the managers of a dry plate works (Auguste and Louis Lumière) were working with a clever engineer (Carpentier). People often seem to be searching for differences, and yet in effect in 1895 two identical teams were working on the development of the cinematograph.

The fact that Paul went on to develop the world's first iron lung is also not usually known to cinema and pre-cinema historians.

One statement that possibly needs verification is the assumption by Colin that Elliott Brothers of the Strand was related to Elliott Dry Plates of Barnet. Apart from the similarity of the names I am not certain that there is a connection between them.

Colin was 80 years old when he died. He leaves his widow Muriel, four daughters, seven grandchildren and two great-grandchildren. RM