PEPPER'S GHOST AT THE OPERA

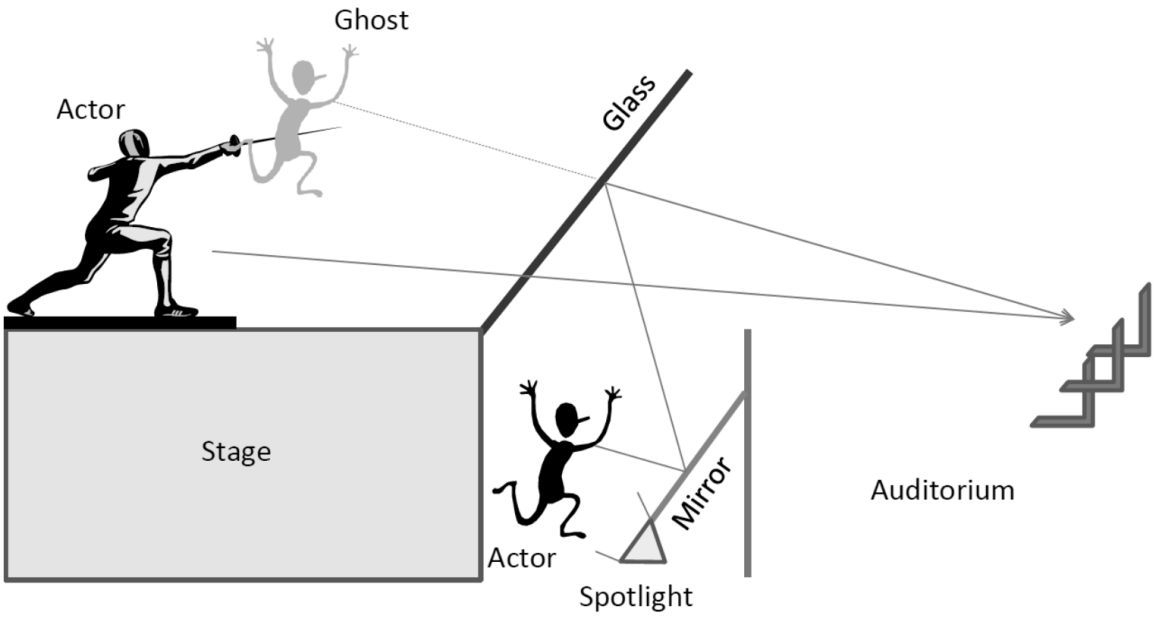
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This article first appeared in *Theatre Notebook*, Vol. 69, No.3, 2015, pp.152-164. The version here is taken from a pre-publication proof. The article arose partly out of a paper on John Barnett's *The Mountain Sylph* that was presented at the 5th International "Music on Stage" Conference at Rose Bruford College in 2014 and from work prepared for the www.englishromanticopera.org website.

(Subsequent to the initial publication any new material that has since come to light has been added in a "Further Notes" section at the end and its place in the main text by a superscript capital letter).

The literature on Pepper's Ghost, a Victorian device for creating ghostly illusions on the stage, gives the impression that the device, after a brief life in mainstream theatres, was then only to be found as a fairground attraction. This paper aims to correct this impression and to show that the device was used far more widely. After a brief description of Pepper's Ghost, for the benefit of those unfamiliar with the device, the paper goes on to describe a group of touring theatre companies that integrated the effect into adaptations of popular plays and operas.

The idea behind the "ghost" stretched back to the sixteenth century but a theoretical scheme for its use in the theatre in Britain was first suggested by Henry Dircks in 1858 and then modified in 1862 by Professor John Pepper, director of The Royal Polytechnic, so that it became a practical piece of apparatus that could be used in a wide variety of locations, including a "fit up show of Pepper's Ghost" being reported in the Scottish Highlands (S.W.). The principle behind it was commonplace. If we look through a window we can see things outside but if it was dark outside then the glass would act as a mirror and we would see a reflection of what was in the room. The device used this relationship of glass and light to simulate a "ghost". The schematic below shows its final and most sophisticated version.[1]



Schematic of the Pepper's Ghost Installation

The spotlight, initially an oxy-hydrogen limelight lamp but later possibly gas or electric, lit up the actor who was below the stage hidden from the audience in a compartment completely lined with black cloth to minimise any extraneous reflected light. It was known as the oven because of the heat generated by the lamp (Speaight 22). The actor's image was reflected first by the mirror and then by the angled glass and was thus seen as a "ghost" by the audience, who could also see other actors through the glass. When the light below was switched off the "ghost" disappeared. Clearly it would have required considerable skill for the stage actor and "ghost" to interact effectively, given that they could not see each other, and they used the music and marks on the stage and in the oven in order to coordinate their actions (Steinmeyer 35). The stage lighting needed to be controlled very skilfully to allow audiences to see both the stage actor and the "ghost" reflection and to ensure that the stage glass was not apparent to the audience. The mirror could be tilted causing the "ghost" to rise and there were other modifications, for example, so that only the apparently dismembered head might be shown floating in space (Speaight 18-19). Pepper and Dircks' 1863 patent application stated that the glass would remain hidden in a slot in the stage and would only be hauled out when the illusion was required (Pepper 10-11) but it is not clear whether this was done in practice or whether the glass stayed in position for a whole scene. The best seats to appreciate the illusion were nearest the stage and often could be reserved (*Glasgow Herald*, 31 Aug. 1863: 1) and there must have been a fairly restricted area where one could get a reasonable view.

The device created quite a stir and chimed in well with the Victorian obsession with ghosts. Pepper earned some £12000 in fifteen months when he used it at the Royal Polytechnic for a variety of effects including playing a scene from Charles Dickens' *The Haunted Man*[2] in which he read the text aloud to a series of ghostly goings-on on the stage (Pepper 12). He then toured the country with the show[3] while imitations also sprung up in Germany, the US and France, where a more primitive version had been tried some years before. The Royal Polytechnic show was done with the auditorium in complete darkness (Taylor 307), something that would have been novel for theatregoers, where auditoriums were often still fully lit,[4] although it was familiar from magic lantern entertainments (Rees 219).

Theatres were not slow to license[5] the idea with *Faith, Hope and Charity* at The Britannia, London, in April 1863 being the first, where it ran for a year and was later revived in 1879 (*The Times*, 8 Sep. 1879: 10). However, the craze quickly abated as the apparatus was too disruptive to be used for typical mainstream drama but the idea continued to find a home in fairground ghost shows that staged a series of tricks and illusions and small sketches. Arthur Sellman (4-11) described life on the road for such shows while George Speaight (23-24) gave an example of one of the sketches that they played.

Both Pepper and Dircks wrote monographs about the apparatus. Dircks' somewhat testy book was his response to what he felt was a lack of recognition of his part in the invention. Other nineteenth-century descriptions include those by J.T. Taylor and Jean Eugène Robert-Houdin (67-85) but the usual article referred to for its origin and operation is that by Speaight. There has been an upsurge recently of articles treating other aspects of its history, for example, Jeremy Brooker, Marvin Carlson, Jim Steinmeyer and Brenda Weeden and the wider implications for its time, for example, Nicholas Daly (197-210), Simon During, Helen Groth and Iwan Rhys Morus. However, none of these mention that, in addition to the ghost shows, there were also companies, usually styling themselves "spectral opera companies", that were more ambitious and looked to put on still reduced but much more complete plays and operas in halls and theatres rather than having their own booths. They used the device to create ghostly characters within the context of the drama, such as Mephistopheles conjuring up the apparition of Marguerite for Faust in an adaptation of Johann von Goethe's *Faust*, rather than just ghoulish effects (*Era*, 28 Apr. 1867: 6).

To begin with spectral opera companies used a narrator while the actors and "ghosts" mimed, thus "The Spectrescope[6] at the Gymnasium Hall" (*Huddersfield Chronicle*, 16 Jun. 1866: 5) described Moses Gompertz [the company owner] narrating an adaptation of Goethe's Faust while "the impersonators … are mute" accompanied by a selection of music from Charles Gounod's *Faust*. Overall it made a good impression and despite the naiveté of the approach one gets a sense of the impact it must have made, "The last scene, Marguerite dying at the altar, and afterwards supported by a company of celestial beings, is undoubtedly an 'impressive denouement', a glimpse of which will amply repay lovers of the sublime and beautiful". Just when the actors began to speak and sing on stage is difficult to ascertain but an 1873 report on a Strange and Wilson's Aetherscope and Spectral Opera Company visit to Falmouth noted that "the acting and singing of the performers have been far above mediocrity" (*Era*, 1 Jun. 1873: 5) and two years later in Barnstaple, they had to curtail their performances because the hall did not have a theatrical licence (*North Devon Journal*, 30 Sep. 1875: 2). Even so it was remarked how much of an improvement of the illusion there had been since the original Pepper's Ghost and that companies had "expanded its capabilities so as to be able to adapt it for stage representations of a high order" (*North Devon Journal*, 23 Sep. 1875: 8). Over a dozen such companies have been identified with The Original Pepper's Ghost and Spectral Opera Company, founded in 1869, probably the longest lived surviving until around the end of the century. The best documented (Powell) are those of Poole & Young, initially run by Charles and George Poole and Anthony Young and that of Strange and Wilson run by two nephews of George Poole but who used a different title to avoid confusion.

The main companies employed as many as twenty singers, dancers and comedians[7] and they travelled widely. For example, in 1877, Strange and Wilson's Company visited, at least, thirty places in Britain and Ireland, usually staying a week but sometimes longer including a six week stint in Sunderland. In fact, they seemed to have run two companies under that name in some years, as a report (*Era*, 13 Jan. 1878: 8) referred to them coming to the end of a three week stint in Crewe, while another (*Royal Cornwall Gazette*, 4 Jan. 1878: 8) claimed them to be in Truro at the same time. Two years earlier, a letter (*Era* 24 Oct. 1875: 7) was signed from someone in Strange and Wilson's Aetherscope (No. 2). Such companies were not perhaps always the ideal employer. In 1889, Maud Hays sued Victor Rosini's Pepper's Ghost and Spectral Opera Company for money owing when she was sacked. She was paid thirty shillings a week as the second female lead. This was at a time when the lowest paid actors in Henry Irving's company in London could expect five to ten pounds a week (Pick 88), although she may have had other benefits in kind. She won her case, the verdict being greeted by applause (*Cheshire Observer*, 21 Sep. 1889: 7) and it was noted that "To get tangible damages out of a spectral opera company is a feat for which the plaintiff will hardly find a parallel in all the thirteen years during which she has been before the public" (*Observer*, 15 Sep. 1889: 4).

The companies usually played in halls, rather than theatres, probably because halls could be better tailored to their particular needs even if sometimes it must have proved rather a squash, "The equipment is very extensive, occupying a considerable portion of the hall"(Carroll 31 March 1875). The use of halls sometimes led to companies being fined for performing stage plays in unlicensed premises. When this happened, as in Aberdeen, someone had to narrate the story while the actors mimed. On that occasion, the company also included an extra spectral farce entitled *Mustn't Speak* (*Aberdeen Journal*, 30 Aug. 1880: 1 & 4). The use of halls would have meant smaller audiences but that would have been acceptable given the constraints for reasonable viewing of the illusion. However, it did mean that seat charges needed to be high with the top price for a reserved seat with the best sight lines often three shillings in the 1870s. This was roughly a labourer's daily wage, so that companies needed to appeal to the middle classes, which meant overcoming any prejudices that they

might have against the theatre. Thus, prior to an appearance at the Music Hall, Chester, an Original Pepper's Ghost and Spectral Opera Company advertisement (*Cheshire Observer*, 9 Nov. 1878: 4 & 5) asked for "The Special Attention of the Clergy" and continued:

> There can be no reasonable doubt that, within the last few years, much that is demoralising has found its way into public entertainments of almost every class. Mr. Fred Smith [the company owner] wishes it to be emphatically understood that it is his desire to improve the public taste by producing (in conjunction with Pepper's Ghost), a class of entertainment which, while it amuses, will also refine and elevate.

To support this serious intent a "scientific conversazione" was arranged under aristocratic patronage to demonstrate "several of the more recent discoveries in physical science". On another occasion, Smith, pouring scorn on Strange and Wilson's claim to have a telegram from Pepper giving them exclusive rights to the Ghost, advertised that "MERIT, RESPECTABILITY, AND TRUTH Characterises this Entertainment" (*Daily Bristol Times and Mirror*, 8 Feb. 1876: 1).

By the 1890s the top seat charge seemed to have reduced to two shillings amid other signs of waning popularity. For example, a week's visit to Aylesbury by Rosini's Company was described as "sparsely attended" (*Bucks Herald*, 7 Apr. 1894: 5), while others seemed surprised that such a show still attracted audiences given that it "was originally produced in the Ark and is sempiternal" (*The Bury and Norwich Post*, 5 Apr. 1898: 8). By the turn of the century the companies, followed soon after by the ghost shows, had disappeared altogether hastened on their way by the advent of film and its much greater potential for illusion, which "put quite in the shade the extraordinary optical delusions effected by 'Pepper's Ghost' some years ago" (*Arbroath Herald*, 25 Feb. 1904: 4). The Original Pepper's Ghost and Spectral Opera Company was purchased and its previous owner, Fred Smith, hired for a New Zealand tour early in the new century as "Northcote's Pepper's Ghost Spectral & Opera Co." (*Colonist*, 27 Dec. 1900: 2), but it seemed to have disappeared after a few months.

An 1893 poster of The Original Pepper's Ghost and Spectral Opera Company ("Prestigious Prestiges") listed a repertoire of eleven shows, which remained fairly constant over the years and was largely common to all the other companies, no doubt because of the limited number of shows that could use the apparatus to good effect and the difficulties of working out effective scenarios with the "ghosts". The two most popular items were adaptations of *Faust* and Dickens' *A Christmas Carol*. Gompertz's company claimed to have performed the former over 4000 times (*Aberdeen Journal*, 1 Apr. 1886: 1), presumably the total of what was first billed as an adaptation of Goethe's *Faust* but later as of Gounod's *Faust*, although its presence was probably due as much to the popularity of Gounod's music, which was used with both, as its suitability for the apparatus. On the other hand, John Barnett's 1834 opera, *The Mountain Sylph*, was also frequently performed, despite having effectively disappeared from the opera house by the 1860s, because it provided excellent opportunities for the illusion, "by far the best part of the performance" (*Bristol Mercury*, 6 May 1890: 5), with much flitting about by the Sylph and an invocation to demons. Other operas included Richard Wagner's *The Flying Dutchman*,[8] Carl Maria von Weber's *Der Freischütz* and Michael William Balfe's *Satanella* with its female demon. However, it is less obvious how companies worked the effect in any substantial way into *East Lynne*, a popular melodrama of the day based on Ellen (Mrs. Henry) Wood's novel, or Charles Dibdin's ancient favourite, *The Waterman*, which was performed in Dublin by the Pepper's Ghost and Spectral Opera Company, probably a different company to The Original Pepper's Ghost and Spectral Opera Company (*Freeman's Journal*, 14 Mar. 1884: 4). It may be that the company received a specific request to put it on as there do not seem to be any other instances of spectral opera companies staging it. Thus possibly companies played some items essentially

as a conventional touring company. In fact, for a while, Strange and Wilson described themselves as the Royal Aetherscope and Grand English Opera Company[9] (*Gloucester Journal*, 13 Dec. 1879: 1). One oddity is the popularity of an adaptation of what was claimed to be a Friedrich Schiller poem entitled *The Storm of Thoughts*, although it is not clear as to what work it referred. The poem only ever seems to have been referenced by spectral opera companies, the first mention being near the end of 1867 by the Poole & Young company (*Bristol Mercury*, 7 Dec. 1867: 4). Thus it is possible that it was cobbled together from various sources and Schiller saddled with it to give it a respectable pedigree.

The companies used a similar format that lasted around two hours in total[10] with sometimes two shows in a day, whereas the ghost shows staged a repeated series of fifteen to twenty minute shows (Speaight 22). As well as the main play or opera, the companies often included a short concert and always a ghostly farce to conclude. Scene changes could be quite lengthy (Posner 199). Thus, the play or opera would have been reduced to less than one and a half hours, probably under half the time of the original, certainly in the case of Gounod's *Faust* where five acts was reduced to five scenes and thirty tableaux (*Gloucester Journal*, 13 Dec. 1879: 1). *The Mountain Sylph* was reduced from five to three scenes according to an advertisement for Professor Pepper's PROTEOUS and the Spectral Opera Company's performance in Hanley (*Staffordshire Sentinel*, 16 Feb. 1875: 2) and Strange and Wilson used a similar format in Guernsey (*Star*, 18 Aug. 1877: 2). On the other hand, a report from Plymouth (*Era*, 31 Oct. 1875: 7) on *A Christmas Carol* noted that "The text is followed as closely as possible". The shows were accompanied by a piano and sometimes by other instruments and even on occasion by the local military band, such as when the band of the 76th Regiment helped out in *Faust* at Rotherham (*Era*, 23 Nov. 1879: 7).

As might be expected given that this would be seen as peripheral, low status entertainment, reports on performances were comparatively few and usually confined to the size of audiences but occasionally there were remarks on the performance, for example, as in the Falmouth example quoted above. A performance of *The Mountain Sylph* in Edinburgh was thought a "very pleasing rendering" notwithstanding that "The vocal powers of the performers are by no means of the highest order though one or two of the singers are fairly proficient" (*Scotsman*, 12 Jan. 1886: 4). Another in Scarborough thought *Satanella* was "done full justice by the company, which is a most efficient one, and contains several artistes of real merit" (*York Herald*, 3 Mar. 1889: 3). A review in Dublin went into more detail:

> The performance was of an exceedingly clever and exciting character. Mr Edward Arthur, who possesses a sweet tenor voice, contributed very much to the success of the piece. Mr Howard Oakley's fine baritone was also heard to excellent effect. In a farce, which followed, Messrs Fred and Will Smith kept the audiences in roars of laughter (*Freeman's Journal*, 11 May 1893: 5).

The fullest account that has been found is one for a Strange and Wilson company performance of *The Mountain Sylph* in Guernsey in 1877. The review (*Star*, 18 Aug. 1877: 2) talked of "a vividness that must be absent from any ordinary representation of the opera" that suggests that the writer had not seen the actual opera but, despite the opera being substantially reduced in length, as mentioned above, clearly still found the plot coherent. The review continued:

> The scenery is very imposing throughout the opera, and the Scotch characteristic dress adds greatly to the charms of the piece. The part of Donald was undertaken by Mr. F. Salcombe, who pourtrays [sic] the character to a nicety. His sweet tenor voice is always appreciated, and rounds of applause greet him whenever he makes his appearance on the stage. Christie, by Mr. C. Braide, elicited roars of laughter throughout. His quaint style of

> acting stamps him as a comedian of no mean order. Hela (the Wizard) by Mr. Vincent, was exceedingly good, and his make-up added greatly to the effect of his impersonation… Miss Clara Jervoise, principal soprano, as the Sylph, was very pleasing both in her singing and acting. Although this was a difficult part to enact, Miss Jervoise proved herself thoroughly competent, and received loud ovations from her audience. The important services rendered by Mr. Sidney Dalton as pianist and conductor are especially worthy of mention.

It appears that Christie, the secondary male role, was played just as a comic part and did not sing as he does in the opera. The mention of a conductor implies that there were other instrumentalists besides the piano; Strange and Wilson did, in fact, advertise for a first violin, cornet, flute and double bass a month after this visit (*Era*, 9 Sep. 1877: 19). The show was clearly a success: "The rapid transformation and disappearance of different persons nightly are beheld with delight and astonishment by crowded audiences".

The remarks about Hela and the Sylph above are worth more detailed consideration. Firstly, the remarks on Hela's make-up could indicate that he used some sort of phosphorescent paint that glowed in the comparatively dim lighting of the stage where conventional make-up would have made little impact. William Balmain took out a patent for "self-luminous paint" in 1877,[11] so some related concoction in use here would be credible.

In the case of the Sylph, if we go back again to the set-up of the apparatus the first point is how big an area of the stage would the glass have covered. A show at the Theatre Royal, Newcastle in 1864 planned to use two sheets, one 8ft. by 10ft., and the other 6ft. by 4ft. We know this because there was a court case when the glass got smashed in transit by the Lancashire and Yorkshire Railway Company (*The Times*, 31 Mar. 1864: 11). Thus, the glass would have covered, at best, around a third to a half of the stage, given that the average width of a provincial Victorian theatre stage was about thirty feet (Booth 71), unless large areas were blocked off. Sometimes theatres might have the resources to use multiple sheets to cover the stage, such as the three sheets, each 15 ft. by 15ft., claimed to have been used at the Théâtre Impérial du Châtelet in Paris in 1863 (Robert-Houdin 93-94). The same method was also used, but rather less effectively, by P.T. Barnum as there was comment that the three pieces of glass could be seen (Posner 200). Such a size would have been at the limits of technology with the Thames Plate Company's sheet of 18ft. 8 ins. by 10 ft. 10 ins. for the Great Exhibition (*Era*, 25 May 1851: 9), almost certainly the largest at that time.[12] In addition, the sheets needed to be free of blemishes and distortions and, in the court case referred to above, it was claimed that 500 sheets needed to be made before achieving one with the necessary qualities, although possibly the plaintiff might have been exaggerating to underline his loss (*Liverpool Daily Post*, 30 Mar. 1864: 7). The value of the sheets was put at £16, although *The Times* account put it at £9. Either way, it was comparatively expensive for the time.

The companies' use of halls would have usually given them proportionately greater glass coverage than in a theatre. Even so, given the cost and the need to transport the glass or glasses frequently, it seems highly likely that they were of a size sufficient to cover only one or two areas of the stage thus restricting where the ghost could appear. The question then arises as to what happened when the actors spoke and sang. To have done so behind the glass would have given the voice a different characteristic compared to when heard from a non-glassed area of the stage and possibly, as Speaight (22) claimed, "no speech could be heard from [the area behind the glass]". Thus, in a scene with a "ghost", in this case the Sylph, would she have spoken or sung from the oven or from a non-glassed area of the stage? In the former case, the sound coming out of the oven and deflecting off the glass would have not have synchronised well with the on-stage "ghost" and broken the illusion (Posner 199). One alternative would have been for the Sylph to speak or sing from the stage and then exit before

a double in the oven went through the "ghost" routines. Another alternative would have been to have the Sylph appear on the stage when singing or speaking and then to disappear back down into the oven for the "ghost" sequences. Despite seeming unlikely because of too obvious a difference visually and too onerous given the heat below, this may have been what happened for one description noted that the actors

> sometimes appear in their own proper person, and at other times in the ghostly form. What may be called 'airy nothings' and the living beings are so much alike, and change into each other so quickly, that it is almost impossible for even the shrewdest and closest observer to tell which is shadow and which is substance. (*Era,* 28 Apr. 1867: 6)

The earlier Guernsey reviewer's comment on "a difficult part to enact" might be an acknowledgement that the Sylph did move between oven and stage. Of course, it may be that the use of a double was good enough to fool both reviewers.[A]

Overall, we get a picture of these companies mastering the technology to an impressive degree and providing much reduced but still intelligible performances tailored to the particular resources available and usually with a decent standard of staging and musicianship. In the course of the thirty years or so of their existence they gave audiences much pleasure and a taste of works that they might well never have experienced otherwise. Thus Pepper's Ghost was a more familiar and versatile device with a more varied history than might have been thought from previous articles.

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Notes

[1] A contemporary illustration can be found at https://collections.museumvictoria.com.au/content/media/11/63761-large.jpg.

[2] Dircks (65-70) claimed that he had envisaged *The Haunted Man* as a good vehicle for the illusion. He also gave several other scenarios, although it is not clear whether any were ever performed.

[3] The Royal Polytechnic show continued for some years and was finally revived by Pepper for Christmas 1889 while Pepper's Ghost was one of the events included in a Victorian Era show at Earl's Court that celebrated aspects of Victoria's reign as part of her diamond jubilee in 1897 (*Morning Post*, 11 Sep. 1897: 1).

[4] Auditoriums were sometimes dimmed to enhance the impact of the staging (Rees 219) but, in Britain, the first person to darken the theatre as a matter of routine was Henry Irving when he took over the Lyceum in 1878. Bram Stoker (907), Irving's business manager better known for his novel *Dracula*, wrote that this had not been the custom up to that time.

[5] Pepper and Dircks held a patent on the apparatus and Pepper was quite zealous in protecting it leading to a lawsuit on at least one occasion (*Standard*, 24 Sep. 1863: 3).

[6] Spectroscope, Spectrescope, phantoscope, ethoscope or aetherscope were sometimes included in company titles or descriptions to give a spurious scientific gloss or to claim some unspecified improvement.

[7] Poole and Young advertised nine singers for a show in Bristol in 1867 (*Western Daily Press*, 7 Dec. 1867: 1) while Strange and Wilson advertised eleven singers for a performance in Cupar (*Fife Herald*, 1 Apr. 1875: 1) but two years later they listed their company as having fourteen singers, two dancers, three comedians and a character actor (*Era*, 15 Jul. 1877: 11). For a brief time in 1879, they claimed to have twenty-one (*Gloucester Citizen*, 8 Dec. 1879: 2). An 1893 poster for The Original Pepper's Ghost and Spectral Opera Company ("Prestigious Prestiges") also claimed twenty artistes and comedians.

[8] Advertised as having "great scope for the introduction of Optical Illusions, Scenic and Mechanical Effects" – perhaps not quite what Wagner had in mind (*Trewman's Exeter Flying Post,* 13 Sep. 1882: 1).

[9] In 1873, Joseph Poole, one of the Strange and Wilson owners, had run an English Opera Company (Powell 75), which may account for the praise that the company got for their musical abilities.

[10] For example, Strange and Wilson (*Bath Chronicle,* 10 Nov. 1877: 3), Gompertz (*South Eastern Gazette*, 26 Feb. 1887: 1) and The Original Pepper's Ghost and Spectral Opera Company (*Freemans's Journal,* 9 May 1893: 7).

[11] The US patent, US264918 A, included a statement that it was granted a patent in England on November 7, 1877, No. 4152.

[12] Dungworth (11) discussed the limits of glass technology in the nineteenth century.

Further Notes

Subsequent to the initial publication this section includes any new material that has since come to light.

A – When Mr Daniel Saunders was questioned by the Parliamentary Select Committee on Theatrical Licenses and Regulations in 1866 (p.259 of the report), he affirmed that in his use of the "Ghost illusion", two people were on stage and the rest beneath the stage and made no mention of switching. (added 21/5/18)

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