

Gabriel Egan  
Shakespeare Institute  
Church Street  
Stratford-on-Avon  
CV37 6HP  
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'Geometrical' Hinges and the frons scenae of the Globe

The frons scenae of the newly completed 'Shakespeare's Globe' on Bankside is decorated in relief with columns and statues. The stage doors open onto the stage rather than into the tiring house, so the embedded columns prevent the doors being opened to their fullest extent and then fastened to the frons. The only extant contemporary picture of the frons in a London outdoor playhouse of the period is De Witt's drawing of the Swan, and it shows a flat wall against which the stage doors could have been fastened if the users had wanted this done<sup>1</sup>.

Why might the players want to fasten the door fully open? Richard Hosley demonstrated that the De Witt drawing shows everything needed to stage Shakespeare's Globe plays and that in the absence of a central opening which could be used for 'discoveries' (De Witt shows none) the stage doors could fulfil the same function<sup>2</sup>. By fastening a stage door against the frons a recessed space would be created which could be concealed by a curtain until the moment of revelation. The curtain could cover the stage door too, if that was thought to obtrude undesirably.

By decorating the frons in relief and fixing the stage doors so that they open onto the stage, the designers of the new Bankside Globe seem to have denied themselves this method of executing discoveries, since the doors cannot be made to lie flat against the frons. This leaves the central opening between the stage doors as the only means of performing a curtained discovery behind the scenic wall. If the stage doors could be made to open both ways, onto the stage and into the tiring house, the problem would be solved because the doors could be tucked away inside the tiring house when a discovery was to be performed. In The Duchess of Malfi, Webster made a clear allusion to the special kind of hinges needed to achieve this:

I know death hath ten thousand seuerall doores  
For men to take their Exits: and 'tis found  
They go on such strange geometricall hinges,  
You may open them both wayes:<sup>3</sup>

The Duchess of Malfi must have been completed by 16 December 1614 because the list of actors' names which appeared in the first edition gives the part of Antonio to William Ostler<sup>4</sup>. Documents from a case brought against John Heminges by Ostler's widow were found in the Public Record Office by C. W. Wallace and in one of these Ostler's death is recorded as occurring on 16 December 1614<sup>5</sup>. Webster's reference to the strangeness of the hinges suggests that they were a new invention and the explicit theatrical metaphor (emphasized by the use of italic fount for the word "exits") gives good reason to suspect that stage doors were an early application of the invention. It should be noted that hinges had long been available which allowed gates to travel more than 180 degrees, but these required a gap between the door and the frame: the wider the gap, the greater the range of movement. A "strange geometricall" hinge probably used two articulations--essentially the same topology as a triptych folded into a 'z' shape--to achieve 360 degrees of movement (with a slight translation equivalent to the width of the door). Such an arrangement of hinge upon hinge would preserve the snug fit within the frame which is afforded by conventional door hinges. Each articulation need provide only 180 degrees of movement but an interlock device (presumably Webster's 'geometry') is required so that when one joint is in use the other is locked in the closed position.

If the hinges were a new invention, or a new application of existing technology to theatre doors, this might explain why the frons of the Swan, as shown by De Witt, was flat. Although often said to show a bare stage De Witt's drawing actually indicates quite clearly that the Swan was highly decorated. As Richard Southern long ago noted, De Witt's description that the building was "ligneis suffultum columnis" means not only 'supported by wooden columns' but also 'embellished with wooden columns'<sup>6</sup>. In De Witt's text the columns were said to be "marmoreum colorem" ('painted to resemble marble') and in the picture they are provided with bases. Not only the stage posts, but also the posts in the stage balcony and those in the spectators' galleries have bases and so should be called columns rather than posts. Amid this decorative splendour the flat and apparently bare frons is hard to explain unless stage doors were used for discoveries and hence relief decoration was impractical. If there was any surface painting of the frons it would be no more visible in the picture than the marbelization of the stage posts to which De Witt's description attests but which his drawing lacks.

Webster's reference to "strange geometricall hinges" permitting two-way doors "for men to take their Exits" was made around the time that the Globe was being rebuilt. The replacement Globe was no larger than its predecessor and yet, as Herbert Berry has shown, it cost more than twice as much to construct even after allowance has been made for the recycled members of the 1599 building and the inferior 'furred' timber of the replacement<sup>7</sup>. Berry concluded that the extra money must have gone on decoration, and if the flat frons of the Swan is at all representative of the one at the first Globe, this part of the playhouse would have been an obvious candidate for improvement. The newly available hinges would have provided the designers of the second Globe with a means of decorating the frons in relief without preventing the use of the stage doors for discoveries.

## Notes

<sup>1</sup>Reproduced and discussed in R. A. Foakes, Illustrations of the English Stage 1580 - 1642, London, 1985, pp. 52-5.

<sup>2</sup>Richard Hosley, "The Discovery-Space in Shakespeare's Globe", Shakespeare Survey 12, 1959, 35-46.

<sup>3</sup>John Webster, The Duchesse of Malfy, London, 1623, sig. K2v.

<sup>4</sup>The Duchesse of Malfy, 1623, sig. A2v.

<sup>5</sup>C. W. Wallace, "Shakespeare in London: Fresh Documents on the Poet and His Theatres, the Globe and Blackfriars", The Times, 2 and 4 October 1909.

<sup>6</sup>Richard Southern, "Colour in the Elizabethan Theatre", Theatre Notebook, 6:3, 1952, 57-8, p. 58.

<sup>7</sup>Herbert Berry, Shakespeare's Playhouses, New York, 1987, pp. 151-94.