

As a special problem in perspective, the theatre is given incidental treatment in a brief section at the end of the Book II. The subject is included because it was one of the many duties of the court architect to provide stages, auditoriums, and scenes for the entertainments of the prince. Although Serlio speaks with great enthusiasm about his experience in building scenes, he brings the book to a close with a much shorter account than he had intended. The section shows every evidence of hasty writing. He repeatedly says that there is more he could tell. In a notice to the reader at the end of the volume, he complains that lack of time forced him to "give such a sudden end to this book of perspective." "So many things come to my mind," he adds, "that I could have made a much larger book." Hence the absence of anything from Serlio's account can not be taken as evidence of its non-existence at the time. Even the designs are suggestive and not complete.

Brief though it is, as the first published account of modern theatrical practice it exercised great influence on later stage activities. The plates, the first regularly published scene designs, were copied and repeated in many books on architecture which touched on the stage. In 1547, two years after they first appeared, Jean Martin, who made the French translation of Serlio's text, used them in his edition of Vitruvius. In 1552, they appeared in the second edition of the Vitruvius of Philander, a pupil of Serlio. Barbaro used them in 1568 for his treatise on scenery in his *Prospettiva*, which was also based closely on Vitruvius. Although many designers varied from the strict interpretation of the three types of scenes, yet the influence of Serlio's interpretation of the Vitruvian Tragic, Comic, and Satyric types may be seen not only in Italy but also in the sketches of Mahelot and of Inigo Jones.

From "The Second Book of Architecture" 1545

In the following design I propose to deal with the construction of theatres and the making of scenery. My task is not an easy one, for it is hard to demonstrate how and where the vanishing point (the horizon) should be placed for a scene, since the rules are different from those which I have already stated. It

seemed advisable first to present a cross section, but, since the ground plan and the cross section explain each other, the best plan is to study the ground plan first, with reference to the cross section for any details which are not clear. I shall begin with the forestage¹ C. This should be flat and raised to eye-level. From B to A the stage slopes up a ninth part of the length. The broader vertical line from A to M indicates the back wall of the



Cross Section of a Theatre

hall² in front of which the scene is to be made. The narrower vertical line at P indicates the back wall of the set.³ O is the vanishing point. The point where a line drawn to O parallel to the floor of the hall cuts the wall P is the point of intersection. This point serves for the perspective of the back wall only. The line L to O is used for finding the points of intersection for all the front faces of the houses. The vanishing point for the perspective faces is at the point C. It will be understood, of course, that if the houses have two sides,⁴ these two sides will have different vanishing points. So much for the scene itself.

The proscenium⁵ is marked D. E is the orchestra,⁶ raised one-half foot from the ground. F indicates the seats reserved for the nobility. The first tiers, which are marked G, are for the

1. English ed. 1611, "scaffold."

2. English ed. 1611, "hall or other place."

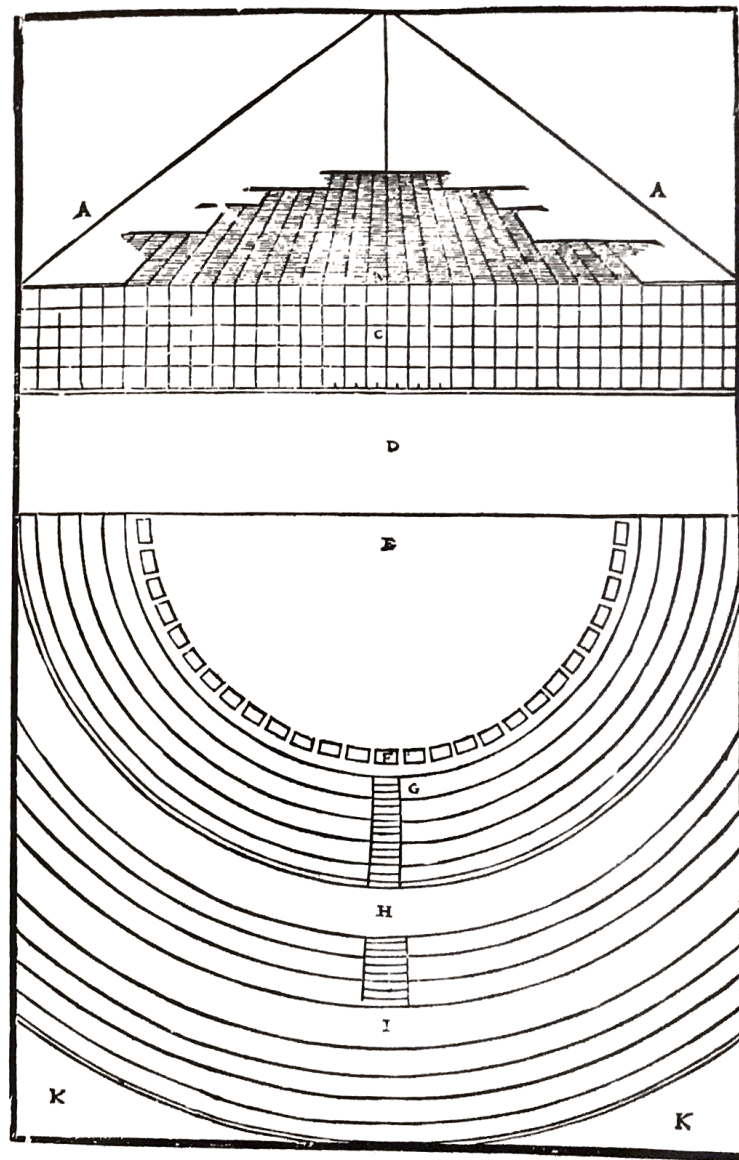
3. English ed. 1611 adds, "that a man may go between it and the other wall."

4. English ed. 1611 adds, "(as they must be built that men may see out of them on both sides)."

5. Italian 1545, "proscenio." In the edition of 1566 and in later editions, this is changed to "la piazza della scena." The same change is made in Book III in the plates showing Roman theatres. The English, 1611, has "post scene."

6. Italian 1545, "orchestra." In the edition of 1566, this is changed to "la piazza del teatro," and the same change is made in Book III.

most noble ladies; the ladies of lesser rank are placed higher up. The broader levels marked H and I are passageways between which are tiers reserved for the noblemen. Men of lesser rank



Ground Plan of a Theatre

will sit on the tiers above. The large space marked K is for the common people¹ and may vary in size according to the dimensions of the hall. The auditorium and stage that I built in Vicenza were planned approximately in the way I have described. Because the auditorium was set in a large courtyard I was able to make it eighty feet² long; but the stage space was more restricted because it was built against a loggia. The scaffolding and framework were constructed as described above, and since there was no supporting wall for the auditorium, I contrived to give it greater strength by reinforcing it with buttresses around the outside.

THE STAGE

Among all things made by hand of man few in my opinion bring greater contentment to the eye and satisfaction to the spirit than the unveiling to our view of a stage setting. Here the art of perspective gives us in a little space a view of superb palaces, vast temples, and houses of all kinds, and, both near and far, spacious squares, surrounded by various ornate buildings. There are long vistas of avenues with intersecting streets, triumphal arches, soaring columns, pyramids, obelisks, and a thousand other marvels, all enriched by innumerable lights (large, medium, small, according to their position), at times so skillfully placed that they seem like so many sparkling jewels — diamonds, rubies, sapphires, emeralds, and other gems.

Here the horned and lucent moon rises slowly — so slowly that the spectators have not been aware of any movement. In other scenes the sun rises, moves on its course, and at the end of the play is made to set with such skill that many spectators remain lost in wonder.³ With like skill gods are made to descend from the skies and planets to pass through the air. Then there

1. English ed. 1611, "common officers and other people."

2. English ed. 1611, "eight and twenty."

3. "That there was a definite relation between the idea of the 'artificial day' which was being advocated at this time as the manifestation of the unity of time and this sun rising at the beginning of the play and going down at its close 'most artificially' seems certain." (L. B. Campbell, *Scenes and Machines*, p. 41, note 4) A moving moon is called for in the production of *La Mélite*, 1630 (*Le Mémorial de Mahelot* (ed. Lancaster, Paris, 1920) p. 76 f.). Suns and moons were frequent in England. The inventories of the Admiral's Men in 1598 (*Henslowe Papers* 117) include "the clothe of the Sone and Moone" (Chambers, *Elizabethan Stage*, iii, 77, n.1) Part II of the *Contention*, scene V, 9, requires that "three sunnes appeare in the aire." *I Troublesome Reigne*, Scene xiii, 131, states: "There the five Moones appeare" (Chambers, *Elizabethan Stage*, iii, 76) For elaborate sun and moon effects after the

are presented diverse *intermezzi*, richly staged, in which performers appear dressed in various sorts of strange costumes both to execute morris dances¹ and play music. Sometimes one sees strange animal costumes worn by men and children who play, leap, and run, to the delighted wonder of the spectators. All these things are so satisfying to the eye and the spirit that nothing made by the art of man could seem more beautiful.

Since we are dealing with the art of perspective, I will proceed with the subject further. The general art of perspective we have hitherto considered was concerned with flat planes parallel to the front, while this second perspective method is concerned with plastic scenes in relief. Obviously the latter must follow different rules. First of all, it is usual to begin the platform at eye level; from front to back this is raised a ninth part; i.e., the depth is divided into nine parts and the stage raised at the back as much as one of these parts. The platform must be made very even and strong to accommodate the dancers.

This slope of the platform I have found from experience to be effective. For in Vicenza, the richest and proudest among cities of Italy, I built an auditorium and stage of wood, perhaps — nay, without doubt — the largest erected in our times, where for the marvellous *intermezzi* which were presented there, introducing chariots, elephants, and diverse morris dances, I built in front of the sloping stage a level floor, the depth of which was 12 feet and the width 60 feet. This I found to be both convenient and effective. As this front platform was level, the floor was marked out with perfect squares (not in perspective), but on the sloping platform the squares diminished as they approached the horizon.

There are some who have placed the vanishing point at the back wall of the scene, in which case it must be placed on the stage itself at the bottom of the wall. This produces a very bad effect, for the houses all seem to run into one. It is my practice to carry the vanishing point further back.² This I have found so very successful that I have always held to it and always advise it to others.

Restoration see Montague Summers, *Restoration Theatre*, p. 194 ff. Cf. the sun at the center of the glory described by Furttenbach in *Mannhafter Kunstspegel* (See below). Cf. Nicoll, *Stuart Masques*, p. 137.

1. Serlio, like some other Renaissance writers, uses morris dance as a general term for theatrical dancing.

2. English ed. 1611, "place the Horizon before the doore."

The scenes for plays are of three kinds — Comic, Tragic, and Satyric.¹ First I shall deal with the Comic. The houses for this scene should be those of private persons. These scenes generally are set up at one end of a hall with rooms behind to accommodate the actors. There one sets up the stage as I have demonstrated in the cross section and the plan.

The part C is the level platform with squares, let us say, of two feet. The sloping floor is marked B with similar squares that diminish in perspective starting from two feet. As I have said above, I do not purpose to place the vanishing point at the back of the scene, but to carry it back from there to a distance equal to the distance from the edge of the sloping platform to the back of the scene. Then all the lines are carried to this back vanishing point. The two lines of points mark the wall at the end of the hall.² The houses and other objects will show better in the foreshortening when all the squares approach the same vanishing point and diminish according to their distance. On the squares are erected the houses, both those with faces parallel to the stage front and those in perspective, as indicated by the heavy lines of the plan. Such houses I have always made of frames over which I have stretched cloth,³ making the openings for doors on either face as occasion required. At times I have heightened the effectiveness of the scene by making some parts of wood, cut in relief, as I will explain in due time.⁴ All the space between the setting and the wall, marked A, is the off-stage space for the performers. Care must be taken that the back of the set is at least two feet from the rear wall so that the performers may pass from one side of the stage to the other without being seen. A

1. Serlio takes his classification of scenes directly from Vitruvius. The same classification existed, of course, in Aristotle's *Poetics*, but Aristotle had emphasized the two types of Comedy and Tragedy. The Renaissance did not know a satyr drama like that of the Greeks, but the plays of the popular pastoral tradition had similar scenes of woodlands and meadows, and characters equally low in social rank. Serlio has in mind the classical concept of rude and free-spoken peasants. But the two concepts were soon confused; Leone di Somi speaks of satyr plays and eclogues in the same breath, as reflecting "that simplicity, purity and joy of the early ages." Serlio's design for satyr plays became a model for pastoral plays.

Later Italian designers and others such as Mahelot and Inigo Jones frequently used the three types of scenes Serlio gives, but many other types were added, and the neat distinction of the three according to social class and appropriate setting was broken down in actual practice.

2. In the elevation drawing the wall is represented by two solid lines.

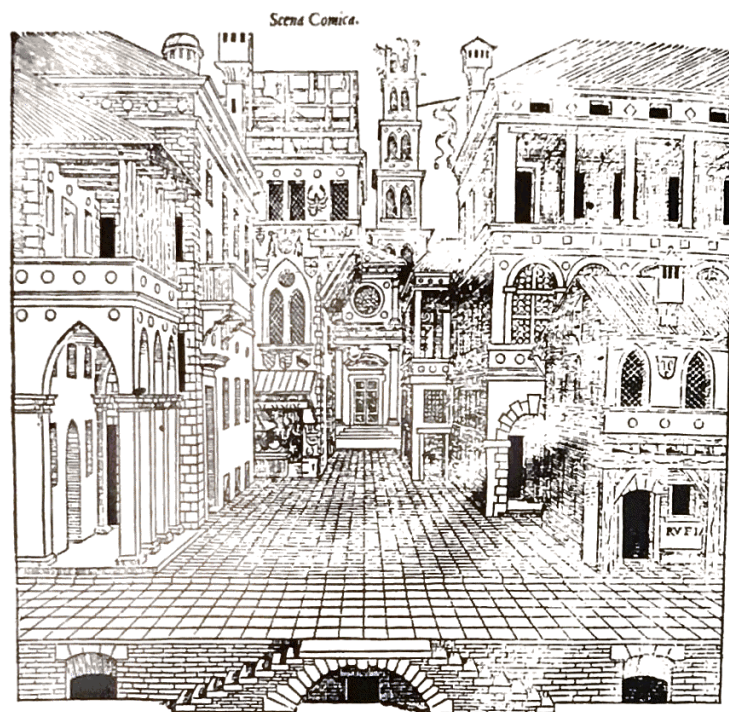
3. English ed. 1611, "spars, or rafters or lathes, covered with linnen cloth."

4. English ed. 1611, "I have also made some things of halfe planks of wood which were great helpe to the Paynters to set out things at life."

point is established at L at the edge of the platform B of the same height as the vanishing point, and thence a horizontal line is drawn to the vanishing point. The point at which this line cuts the back wall of the set is the vanishing point for that wall. But this line will not serve as a guide in constructing any other part of the set, except that it is of use for determining the size of the objects depicted on faces parallel to the back wall. The first vanishing point, which is behind the wall of the hall, is to serve for all the perspective faces of the houses. Since in order to use this vanishing point in the making of actual measurements it would be necessary to break through this wall — a thing not possible — I have always made a small model of cardboard and wood, carefully executed to scale, from which I could easily and correctly execute each piece separately in the large. Although this procedure may seem difficult to some, nevertheless much time and care may profitably be devoted to the making of such models and in practice, so that by careful application of principles the method may be mastered.

Although halls (however large they may be) could not accommodate theatres such as the ancients had, nevertheless in order to follow the ancients as closely as possible, I have included in my plan such parts of the ancient theatre as a great hall might contain. Thus the part D corresponds to the *proscenio*, the circular part marked E corresponds to the *orchestra*, raised one step from the *proscenio*. Around it are the seats for the most noble persons at F. The first tiers, G, are for the most noble ladies. The parts H and F are a passageway. The other tiers are for the less noble men, with steps for easy access. The large spaces marked K are for the common people, and will be larger or smaller according to the size of the hall. The greater the hall, the more nearly will the theatre assume its perfect form.

This first scene, the Comic scene, has houses appropriate to private persons, as citizens, lawyers, merchants, parasites, and other similar persons. Above all, the scene should have its house of the procuress (*ruffiana*), its tavern, and its church. I have already shown how these houses are placed in position, and I now discuss the details of their construction. In a small print, of course, I can do no more than suggest some details certain to please, such as an open portico with arches in the modern style leading to another house. The balconies, called *pergoli* by some, by others *renghiere*, give an excellent effect on the perspective



The Comic Scene

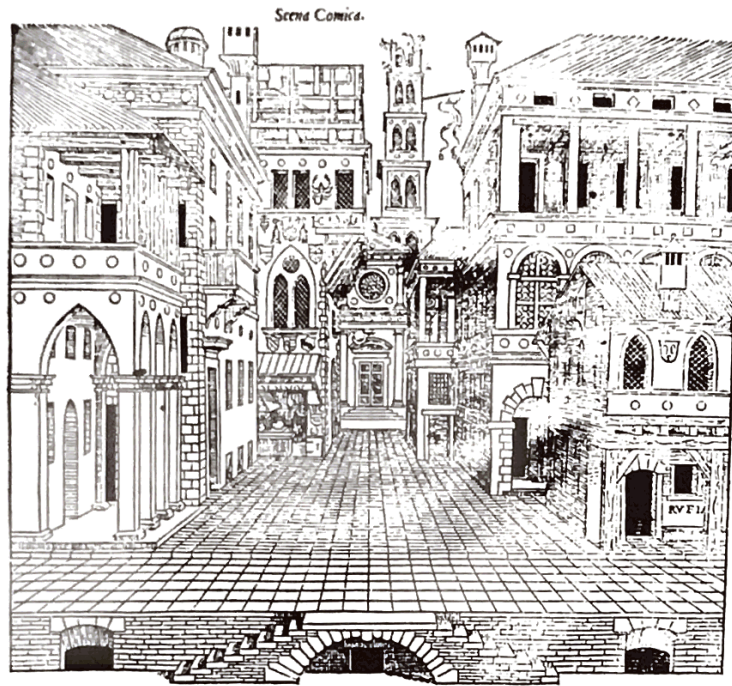
faces, as do the cornices whose ends, cut on the inside, form projecting corners on the houses. For the same reason those houses which have projections are especially successful — such as the tavern of the moon in this design. Above all else one must select some smaller buildings to be placed in front, so that over their roofs the other buildings may be seen, such as you may see above the house of the procurer (marked by the sign of the hooks, commonly called *hami*). The superior height of the houses further back gives the appearance of grandeur, and better completes the scene in that part, which would not be the case if each house were lower than the one in front.

Although the detail is painted with shadows as from a single light at one side, nevertheless it is better to illuminate the scene from the middle because of the greater power of a light

hanging at the center. Those roundels and squares that appear throughout the scene are all transparent artificial lights of various colors; the means for making these I will give at the end of this book. It will be well to put light behind the windows in the front faces, but an especially good effect will be secured by making these of glass or paper or painted cloth. If, however, I were to make all the suggestions I could concerning these things, I should be considered prolix. Therefore I will leave them to the imagination of those who are interested in such things.

The Tragic scene is for the representation of tragedies. In this setting the houses must be those of great persons, because amorous adventures, sudden accidents, and violent and cruel deaths such as we read of in ancient and modern tragedies alike have always taken place in the houses of lords, dukes, grand princes, and particularly kings. Therefore, as I have said, you must introduce here none but stately houses, such as those indicated in the following figure; you must note, however, that, because of the limitations of space, I have not been able to sketch those grand edifices of kings and lords that I could show in more ample space. The architect concerned with these things needs no more than a suggestion of the general method, which he may adapt according to the setting and subject called for. As I have said in the section on the comic scene, the builder must take care to arrange the parts of his setting in such a way as to give the best impression to the spectators, placing, for instance, a small building in front of a higher one.

I have made all my scenes on flat frames. Since these sometimes fail to appear convincing, it is necessary to avail oneself of wooden relief — as in the building on the left side of the stage, the pillars of which rest on a base with several steps. In this case the base must be made of low relief raised above the floor, and upon it are set two frames, one facing the audience, the other in perspective. They extend upwards only to the top of the parapet which runs above the first arches. Now because the second arches are set back so as to make room for this parapet, the two upper frames also must be set back so as to produce the effect desired. What I say of this building applies also to others which have certain parts set back — especially to the houses near the front of the stage. If the house is set very far to the back, however, one frame will be sufficient, so long as all its parts are skillfully designed and painted.

*The Comic Scene*

faces, as do the cornices whose ends, cut on the inside, form projecting corners on the houses. For the same reason those houses which have projections are especially successful — such as the tavern of the moon in this design. Above all else one must select some smaller buildings to be placed in front, so that over their roofs the other buildings may be seen, such as you may see above the house of the procurer (marked by the sign of the hooks, commonly called *hami*). The superior height of the houses further back gives the appearance of grandeur, and better completes the scene in that part, which would not be the case if each house were lower than the one in front.

Although the detail is painted with shadows as from a single light at one side, nevertheless it is better to illuminate the scene from the middle because of the greater power of a light

hanging at the center. Those roundels and squares that appear throughout the scene are all transparent artificial lights of various colors; the means for making these I will give at the end of this book. It will be well to put light behind the windows in the front faces, but an especially good effect will be secured by making these of glass or paper or painted cloth. If, however, I were to make all the suggestions I could concerning these things, I should be considered prolix. Therefore I will leave them to the imagination of those who are interested in such things.

The Tragic scene is for the representation of tragedies. In this setting the houses must be those of great persons, because amorous adventures, sudden accidents, and violent and cruel deaths such as we read of in ancient and modern tragedies alike have always taken place in the houses of lords, dukes, grand princes, and particularly kings. Therefore, as I have said, you must introduce here none but stately houses, such as those indicated in the following figure; you must note, however, that, because of the limitations of space, I have not been able to sketch those grand edifices of kings and lords that I could show in more ample space. The architect concerned with these things needs no more than a suggestion of the general method, which he may adapt according to the setting and subject called for. As I have said in the section on the comic scene, the builder must take care to arrange the parts of his setting in such a way as to give the best impression to the spectators, placing, for instance, a small building in front of a higher one.

I have made all my scenes on flat frames. Since these sometimes fail to appear convincing, it is necessary to avail oneself of wooden relief — as in the building on the left side of the stage, the pillars of which rest on a base with several steps. In this case the base must be made of low relief raised above the floor, and upon it are set two frames, one facing the audience, the other in perspective. They extend upwards only to the top of the parapet which runs above the first arches. Now because the second arches are set back so as to make room for this parapet, the two upper frames also must be set back so as to produce the effect desired. What I say of this building applies also to others which have certain parts set back — especially to the houses near the front of the stage. If the house is set very far to the back, however, one frame will be sufficient, so long as all its parts are skillfully designed and painted.

De M. Sebastian Serlio.

*The Tragic Scene*

Concerning artificial lights enough has already been said in the section on the comic scene.

All the superstructures on the roofs, such as chimneys, belfries, and the like, although they are not indicated on the illustration, are to be made of thin board and cut in profile and drawn and colored with skill. Similarly, statues supposed to be

of marble or bronze will be made of thick cardboard or even thin wood, cut to size, and shadowed. They are to be so placed in the distance that the spectators cannot see them from the side.

Some artists are in the habit of painting supposedly liv-

*The Satyric Scene*

ing characters in these scenes — such as a woman on a balcony or in a doorway, even a few animals. I do not recommend this practice, however, because although the figures represent living creatures they show no movement. On the other hand, it is quite appropriate to represent some person who sleeps, or some

dog or other animal that sleeps, because no movement is expected here. I can recommend painting on the back shutter statues or similar objects supposedly of marble or of other material, as well as scenes of history and legend. Concerning the representation of living things having motion I shall speak at the end of this book; there I will tell how this is to be accomplished.

The Satyric scene is used for Satyric plays, in which all those who live licentiously are reproved and even castigated. In ancient satyr plays lines were spoken which referred, almost without respect to persons, to certain men known in the community to lead evil and vicious lives. Such license, however, as one may readily comprehend, would be conceded only to people who could speak without respect for rank — namely, rustics. Hence Vitruvius in dealing with scenery recommends that these scenes be composed of trees, rocks, hills, mountains, herbs, flowers, and fountains, — together with some rustic huts, such as those in the illustration. And since in our times these performances are generally given in the winter when few trees and bushes have flowers and foliage, these will have to be made artificially of silk, and will receive more praise than the natural objects themselves. Just as in the comic and tragic scenes houses and other buildings are to be imitated by the art of painting, so in this too, imitation is to be made of trees and bushes with flowers.

The more costly these things are, the more they are worthy of praise, because in truth they then express the generosity of rich lords and their enmity to ugly stinginess. Some time ago my eyes beheld such scenes carried out by the architect Girolamo Genga at the instance of his lord, Francesco Maria, Duke of Urbino. In these I witnessed as much liberality in the prince as taste and skill in the architect. Such beauty was there in the setting as I have never seen in any other similar work. Oh immortal God! what wonder it was to see so many trees and fruits, so many herbs and diverse flowers, all made from the finest silk of the most beautiful colors, the cliffs and rocks covered with diverse sea shells, with snails and other animals, with coral branches of many colors, with sea crabs among the rocks, with so great diversity of beauteous things that to write about all of them would take too long. I will not speak of the costumes of satyrs, nymphs, and sirens or of the shapes of monsters and strange animals, skillfully constructed to be worn by men and children according to their size. The movements of the actors

seemed to bring these animals to life, each according to its own nature. And if it were not that I should prove too prolix, I should tell of the superb costumes of some shepherds made of rich cloth of gold and silk, furred with the finest skins of wild animals. I could speak also of the costumes of some fishermen which were no less rich than the others, whose nets were of thread of fine gold and whose other tackle was all gilded. I could also describe some shepherdesses whose costumes put avarice to shame. But all these things I will leave to the taste and judgment of the architects, who will always be able to make things of this sort when they find similar patrons, generously willing to give them full license to carry out all they desire.

OF THE ARTIFICIAL LIGHTS FOR THE SCENE

Above, in the sections on scenes, I promised to describe the means of producing artificial lights of various translucent colors. First I will speak of the color of sapphire blue, much the most beautiful color. Take a piece of sal ammoniac, and have at hand a barber's basin or another basin of brass in which has been put a small quantity of water. Then grind this piece of salt on the bottom and around the basin until it is all dissolved, constantly adding a little more water as you grind, and if you want a more intense color increase the amount of sal ammoniac. Having made then a basinful of this solution, strain it through felt into another vessel, and it will come out a most lovely blue. If you want it lighter you can add some water, thus from one solution getting many shades, lighter or darker as you wish. If from this same solution you should wish to get an emerald shade, add some saffron according as you shall desire it darker or lighter. I am not giving the proportions of these things; experience will teach you to make various shades strong or light or dark. If you want to get a ruby color and are in a place where you can get light and dark red wines, you will find that these will produce both harsh reds and soft reds. If you don't have wines, cut some virgin wax¹ in small pieces, put them in a cauldron of water with some rock alum, set it to boil, skim it, and pass through felt.

1. English ed. 1611, "brazill." French 1545, "coppeaux de breail."

You can add pure water if you wish a lighter shade.¹ If you wish the color of a Balas ruby, a mixture of white and red wines will give it to you. White wines of lighter or deeper tone will give the color of chrysoprase or of topaz. Pure water filtered through felt makes the best counterfeit of diamond. For all these colors you must have containers (*bozze*) made of glass, of special shapes with flat and rounded side to hold the water. There is a special way of placing these containers for the translucent colors. At the back of the painted houses where the lamps are to go is fastened a thin board pierced to hold the lamps separate,² and below it is another board to hold the glass containers. Then each of those *bozze* is placed with the curved part to the opening and made fast lest it be shaken down by the dancing. Behind every one is placed a lamp that the lights may all be even. The sides of the *bozze* toward the lamps should be flat or convex the better to receive and send out the light. In the same manner such lamps are to be put in the openings on the perspective faces. When you need a specially strong light you put a torch behind a glass and behind the torch a barber's basin well burnished. This will reflect a splendor like the rays of the sun. If some of these openings are square or of an almond or other shape, put in them plates of glass of various colors with lights behind.³ But none of these lights have anything to do with the illumination of the scene. For this a large number of candles are placed leaning at the front of the scene.⁴ Also above the scene are hung

1. English ed. 1611, "and use it with water and vinegar."

2. Serlio must have in mind the usual type of stage lamp. A glass globe which contained the fuel had a stem one or two inches long or a tapering bottom. It could be set into a hole made in wood or into an iron ring fastened to the scene, as Furttenbach describes in *Mannhafter Kunstspiegel*. Cf. Nicoll, *Stuart Masques*, p. 134.

3. Compare the colored lights in the production of the *Masque of Flowers*, England, 1614: "... beautiful with transparent lights of variable colours . . . In the two first quarters were transparent lights resembling carbuncles, sapphires, and rubies. In every corner of each quarter were great pots of gilly-flowers, which shadowed certain lights placed behind them and made a resplendent and admirable lustre"; of Ben Jonson's *Masque of Queens*, 1609: "The Freezes [The proscenium arch and the parapet] both below and above, were filled with severall-colored lights, like Emeralds, Rubies, Saphyres, Carbuncles, etc. the reflexe of which, with other lights placed in the concave, upon the Masquers habits, was full of glory"; and of Ben Jonson's *Masque of Beauty*, 1608: "Behind them in the centre of the throne was a translucent pillar, shining with several colored lights that reflected on their backs."

4. The phrase "pendente davanti alla Scena" is usually taken to mean "hanging in front of the scene." The use of "also above the scene" in the following sentence leads us to think that Serlio is speaking of some kind of footlight perhaps similar to the "leaning light" described by Furttenbach. If so this is an important early reference to footlights. The French version, 1545, reads: "... flambeaux

chandeliers,¹ and above these chandeliers a vase of water in which a floating piece of camphor burns will give a very beautiful light and odor. Whenever you wish to show something burning you soak it well in the strongest aqua vitae and set fire to it with a taper.

Although much more could be said concerning fires, I wish to leave that for the present. Now let us speak of some other things which bring great delight to the spectator. For those times when the actors are not on the scene, the architect will have ready some processions of small figures, of an appropriate size, cut of heavy cardboard and painted. These are fastened to a strip of wood and pulled across the scene at some arch in a swallow-tail runway. In the same way can be shown musicians playing instruments or singing, and some one behind the scene will supply the music softly. At other times a troop of people passing over, some on foot, some on horseback, with the muffled sound of voices and drums and trumpets, will greatly please the spectators.

To make a planet or other heavenly body pass through the air, it is painted well on cardboard and cut out. Then far back in the scene, at the last houses, a soft iron wire is stretched across the scene with small rings attached to the back of the cardboard figure, which may be drawn slowly across, by a dark thread. But all must be so far back that neither the thread nor the wire can be seen.

Thunder, lightning, and thunderbolts will be needed on occasion. Thunder is made by rolling a large stone ball on the floor above the hall used for the theatre. Lightning is made by some one in a high place behind the scenes holding a box of powdered resin.² The top of the box is full of holes and in the center is a lighted candle. When the box is raised, the powder is thrown out and set on fire by the candle. A thunderbolt is made by letting down a rocket³ or ray ornamented with sparkling gold⁴ on a wire stretched at the back of the scene. Before the thunder

allumez penduz devant son appareil, & d'avantage certaines torches mises dessus les eschauffaux, & dessus aucuns chandeliers accommodez ou il sera requis, se pourront mettre quelques vaisseaux."

1. Chandeliers were used for a scene in 1496 in the Brussels *Tableaux Vivants* of St. Lucas painting the Madonna. (Hermann, *Forschungen zur deutschen Theatergeschichte*, p. 399).

2. English ed. 1611, "powder of vernis or sulphire."

3. English ed. 1611, "squib."

4. English ed. 1611, "pure gold or chining latten which you will."

has stopped rumbling, the tail of the rocket is discharged, setting fire to the thunderbolt and producing an excellent effect.

But if I were to discuss all the things I know about stage settings, I would never be done; therefore I shall say no more.