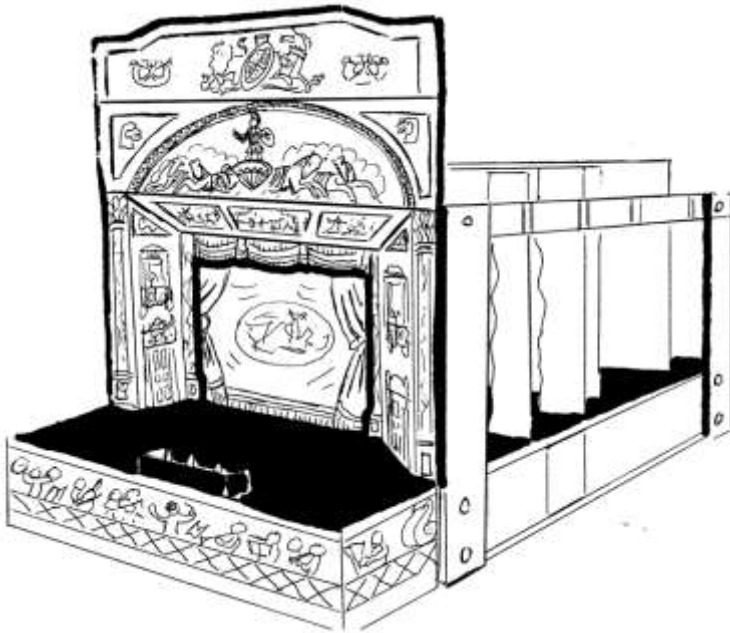


HOW TO BUILD THE GRAND THEATRE



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INTRODUCTION

These notes explain how you can make a robust and practical Toy Theatre using simple woodwork.

Children build Toy Theatres but it does involve the use of sharp hand tools, scissors and other things that might cause accidents. An adult must read these notes and decide which activities it is safe for a child to do and help and supervise as necessary.

The first task is to print off all the sheets for the Grand Theatre in full colour. This should be done full size on ordinary A4 copying paper. If you do not have a printer then take the files to your local copy shop and they will do it for you at low cost.

We have not been too precise about materials and sizes because you may find that you already have the materials you need such as things left over from other activities and off-cuts of wood. It is much better to re-cycle than buy new.

The notes are in two sections. The first section gives a detailed description of how to build the basic theatre. The second section is a slightly vaguer description of various enhancements that you can make to it.

Materials for the basic theatre:

- A sheet of thick A1 size card.
- MDF or plywood about 5mm thick and about 500mm square.
- About 2m of 70mm wide timber, about 8-12 mm thick.
- About 2m of 18-25mm wide timber about 3-6mm thick.
- 1m of timber dowel rod about 5-12mm diameter
- Small screws and possibly panel pins
- Small bolts with matching nuts and washers, eyelets.
- String
- Glue
- A piece of silver foil (oven foil will do)
- Black paint

Tips:

You can buy the small section timber and dowel from the "mouldings" rack of do-it-yourself shops. This timber is more expensive but is straight and of good quality.

You can buy screws, nuts, bolts and washers on a "pick and mix" basis at high street shops. This allows you to get a selection of sizes and lengths so that you can have the most suitable available.

Tools needed:

- Small hacksaw
- Craft knife and straight edge to cut card
- Bonding tape
- Scissors
- Sandpaper (to smooth rough edges and avoid splinters)
- Hand drill
- Screwdrivers
- Spanners or pliers
- Small hammer

There are three appendices to these notes:

- A. Screening the Toy Theatre
- B. Arranging the audience
- C. Toy Theatre plays

SECTION 1. BUILDING THE BASIC THEATRE

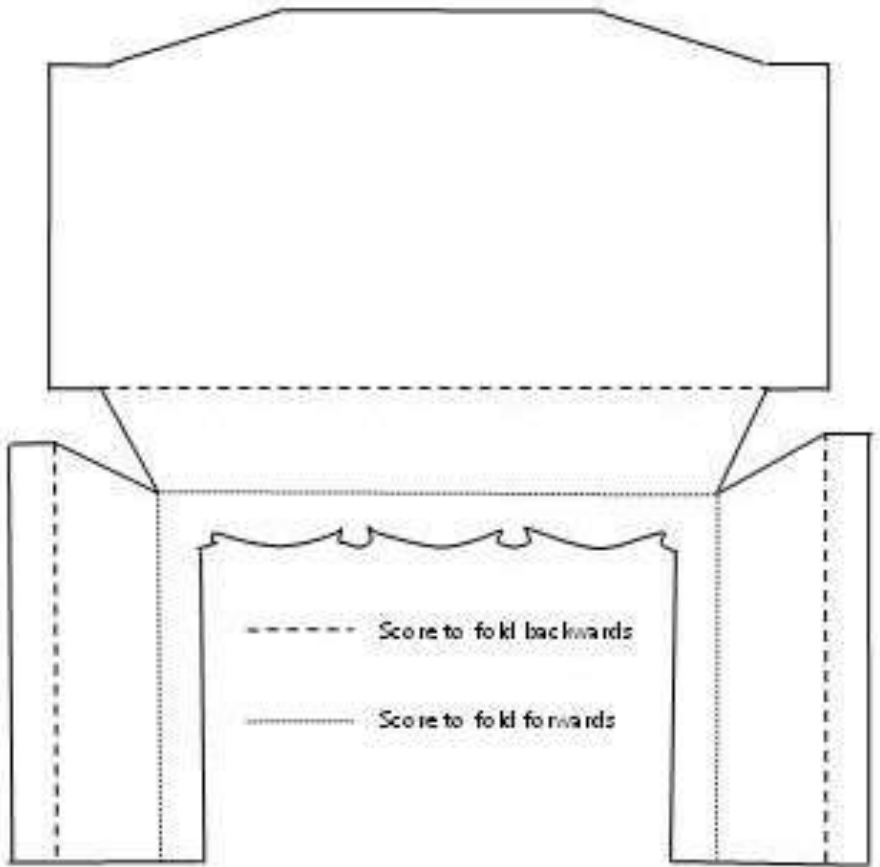
Cut out and stick the stage front pieces onto the piece of A1 size card, arranging them as shown below.



There are two types of stage front that you can make, either “flat” or “mounted”. For the flat front simply glue the complete front, cut around it and cut out the proscenium opening. The mounted version is more attractive however. For this you leave out the bits as shown above and cut out this shape.

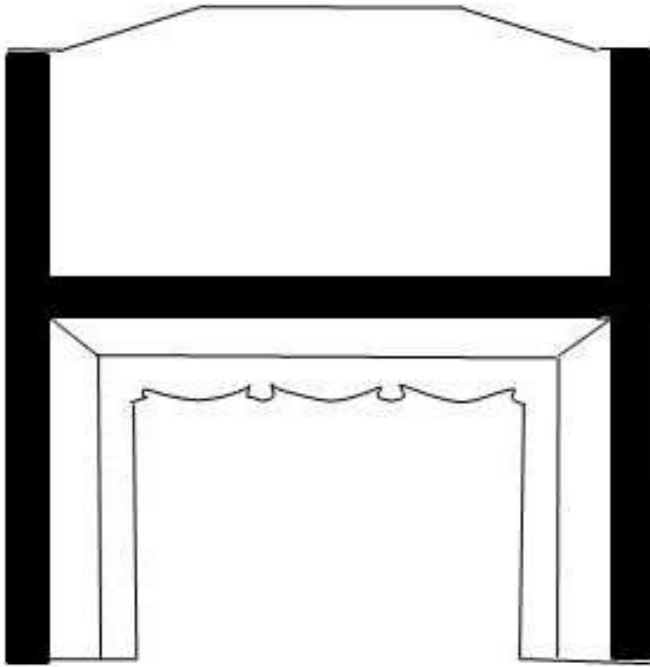
Save the spare card for the drop curtain, act drop and top drops etc.

For the mounted stage front you need to carefully score along lines so that it can be folded.



After folding, join the sides together using tape on the back. Use a bonding tape, never use sellotape!

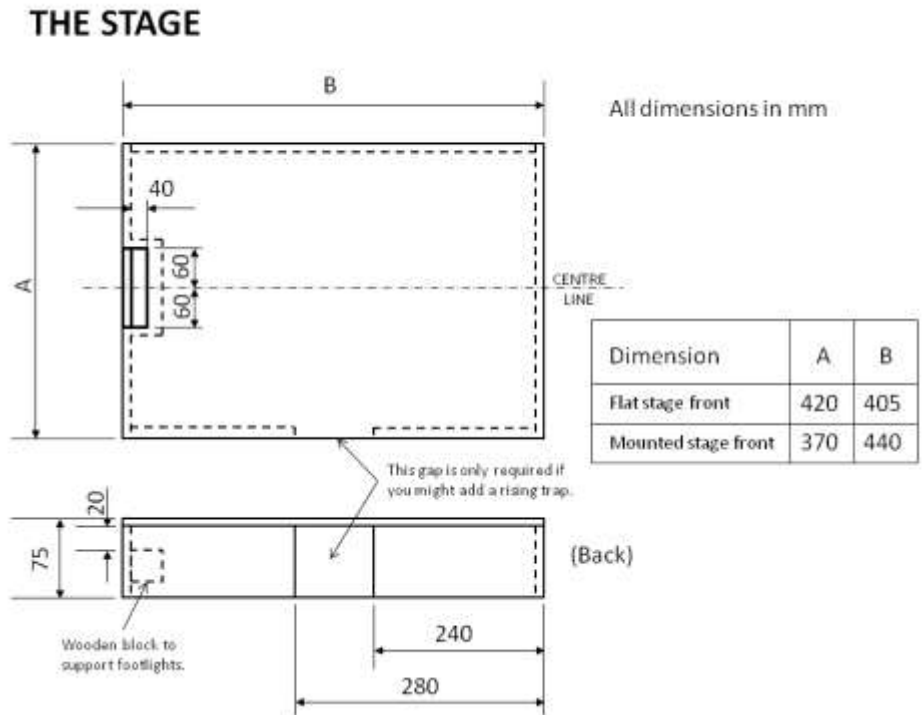
It is a good idea to strengthen the stage front so that it stays upright.



Use battens of wood glued to the back. The uprights should be continuous with the horizontal stiffener between the two. You could use hardboard strips instead or cut out a hardboard, thin plywood or MDF board to cover just the flat areas.

Finally screw a couple of eyelets into the stiffening on the back of the stage front so that you can tie it to the assembled stage using string or wire.

The stage is formed as a box as shown in the drawing below.



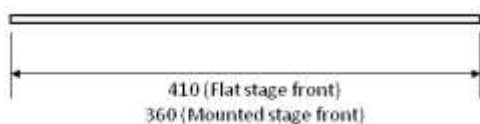
The joins can be made using glue or with small panel pins if the sides front and back are of a thick enough material. Make sure panel pins align properly so they do not leave points exposed and use glue as well.

Note the cut out and block to hold footlights (see later) and the option to have an opening in the side if you decide to use a rising trap (section 2).

Paint the stage floor black, either matt or glossy as you prefer, this shows the scenery up to the best advantage and helps hide the slides.

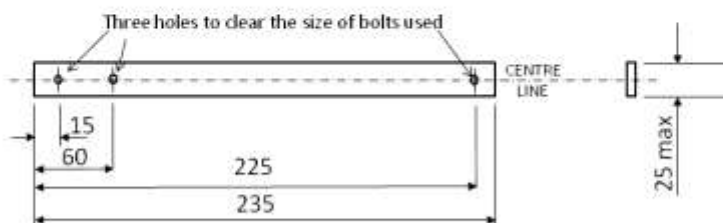
PARTS FOR THE SCENERY GRID

All dimensions in mm

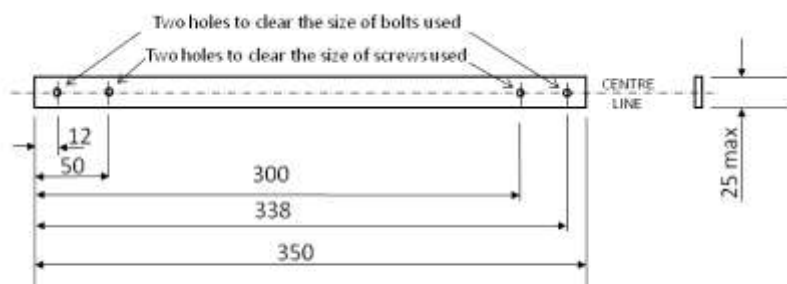


Carefully make a small hole centrally on each end to catch the screws.

1 DOWEL (2 required)

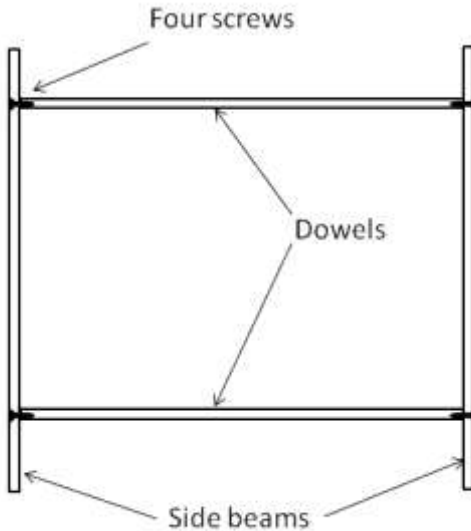


2 UPRIGHTS (4 required)



3 SIDE BEAMS (2 required)

Make the parts for the scenery grid as shown in the drawing on page 8.

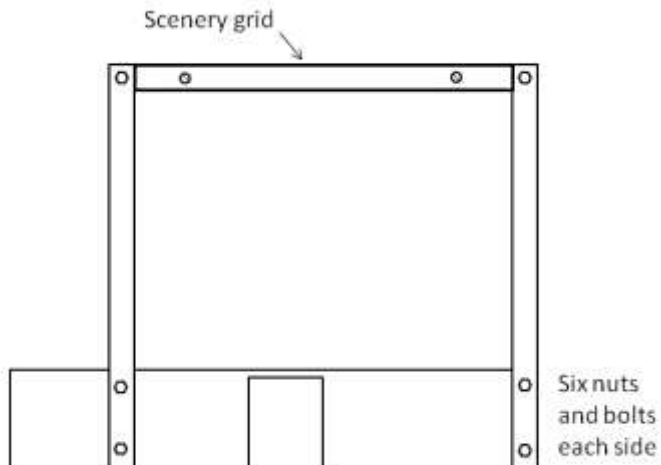


Carefully screw the side beams onto the dowels. Do this on a flat surface so that it ends up flat.

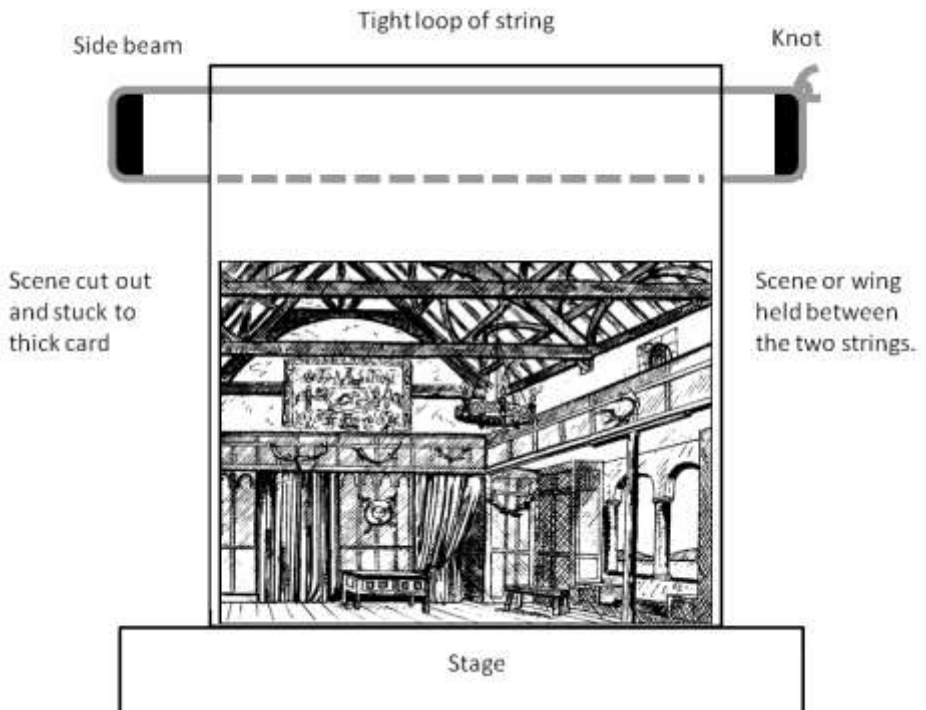
Use small nuts and bolts to screw the uprights to the side of the stage and the assembled scenery grid between them. The use of nuts and bolts means that you can always take the theatre apart later.

Make sure that you use bolts that do not project too far on the scenery grid side in order to avoid catching a hand on one later.

Glue the orchestra strip onto the projecting part of the stage and tie the stage front onto the front uprights (see front cover picture).



Complete the scenery grid by tying loops of string tightly around the frame as shown here.

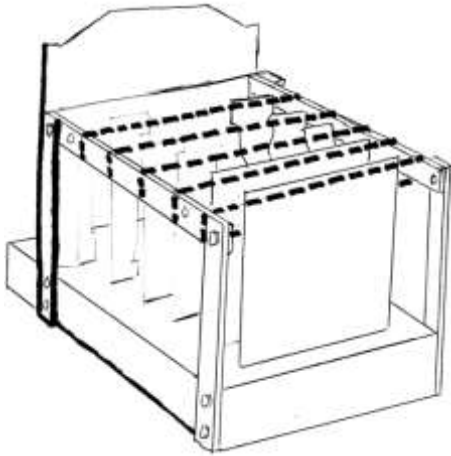


You can tie as many loops as you need and move them back and forward as you like. This method of completing the scenery grid has the benefit of flexibility, simplicity and enables you to see the stage easily from above, which is important when performing. It is also gentler on the paper scenery. You will usually need at least six loops:

1. For the drop curtain and act drop (close behind the stage front).
2. For curtain wings and a curtain top drop.
3. For the first pair of wings.

4. For the second pair of wings.
5. For a backscene or cutscene.
6. For the backscene to a cut scene.

But you can add more, for example to allow one scene to drop immediately in front of another. The completed theatre should now look like this picture from the rear.



If you are a diehard traditionalist then you may prefer to make a scenery grid by glueing strips of wood across the top between the side beams, to hold the scenery in place. This loses the advantages of the string method which does actually work very well. The scenery grid below is from an original Pollock Toy Theatre and has no less than seven slots for scenes and wings.



CURTAINS

Glue the curtain drop and the act drop, in the same manner as for scenery, onto squares of card. These are used in the first scene loop behind the stage front. The curtain drop is down at the start and is only dropped again at the end of the play. The act drop is used between acts or changes of scene, although there are some scene changes that only involve a back scene being raised or lowered in front of one in place, in this case the act drop is not required.

LIGHTING

This is essential to give atmosphere and so that your audience can focus on tiny figures in a dark room.

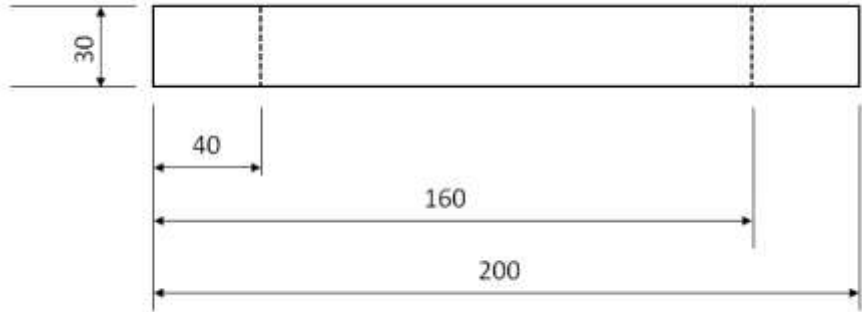
Candles were used in the earliest toy theatres, later small purpose built "burners" were used that were small oil lamps. In America there were even Toy Theatres lit by gas! However all uses of flame in a Toy Theatre are now strictly taboo.

Ever since Edison and Swan it has been possible to use electricity, even so mains electricity should never be used either. When our first handbooks were produced we described the use of miniature pea bulbs in holders wired up to batteries. This technique had been in use for the past 80 years or so. Now however it is extremely difficult to get the little bulbs and bulb holders.



Fortunately new products are easily available that can be used safely and effectively in a Toy Theatre. These include flickering battery tealights. They come in various colours and make great footlights.

The slot and support that you have made at the front of your theatre will hold three of these. You also need to make a simple shield out of black card, backed with silver foil as a reflector. The dimensions are shown here; the dotted lines are where folds are made.



This drops into the slot. The photo shows a similar set up with just two lights.

These tealights have little switches underneath. Turn these on and put them in place before your audience arrives. They will have

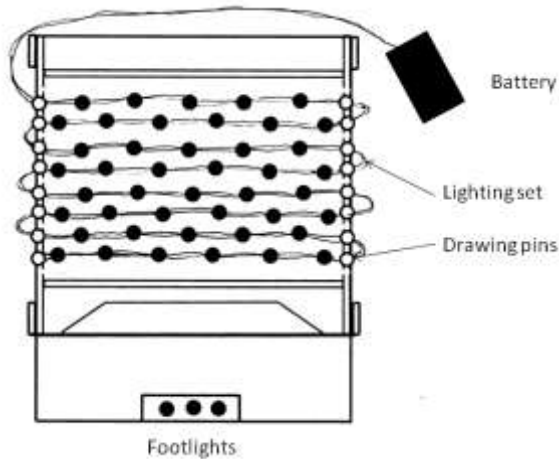


plenty of battery life to keep going through the play and probably several other performances. Their flickering light is ideal.

There is another readily available product that can be used for the

main lighting. These are the battery operated LED lighting sets that are now available not just at Christmas but all year round for

interior decorating purposes. Buy a short set (around 50 LEDs) that gives a white light and has a simple on-off switch, rather than a menu of flash sequences. You can wind this to and fro across your scenery grid. Press the drawing pins in part way first and press them home when the lighting is in place, that way you will avoid putting a pin through a wire. The picture is a plan view, looking down on the stage.



Turn the lights on when you raise the curtain and the start of the play. Turn them off if the stage directions require you to "darken the stage", the footlights will then give a dimmer and more intimate light.

For more specialised lighting effects see section 2.

TOP DROPS

Stick these to card and cut them out. Stick strips of thin battens to the top edge so that they rest on the scenery grid side beams and hang down in front of wings to cover the tops. Make the card the correct size in order to achieve this.

Top Drops stop the shorter members of your audience from seeing the tops of the scenery. They help to hide the top lighting and can also allow you to use slightly smaller scenery if you need to.

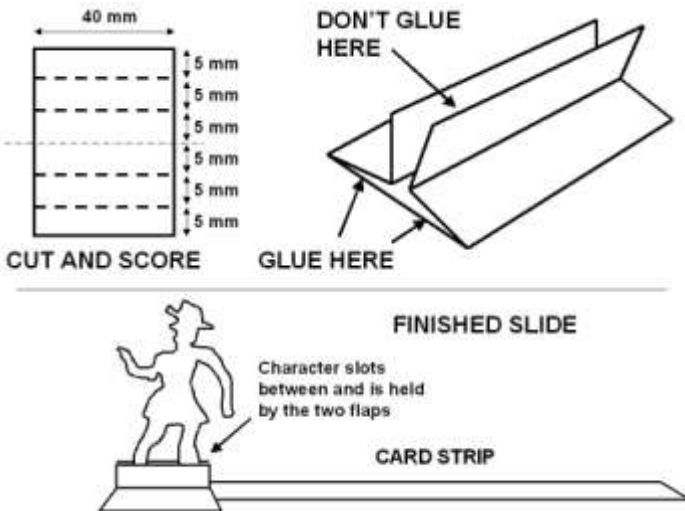
MOVING CHARACTERS ON THE STAGE

The earliest Toy Theatres used an ingenious method of slats with slots which were let into the stage floor. Characters were placed into them as required from either side. They had the advantage of being almost invisible but diagonal movement was not possible and actions such as sword fights were hampered.



This method was replaced by the classic tin slide made of tin soldered to wire. These allowed more freedom of movement and could clash together to make appropriate noises during swordfights, but they were more visible and needed careful handling. Pollock's introduced their famous wire slides in the 1940s revival. These have the

disadvantage of not holding smaller characters firmly and can lose their grip.



You can make simple slides out of black card as shown here. These hold characters firmly and gently. They also have the advantage of being almost invisible on the black floor.

SECTION 2. ENHANCEMENTS

There are all manner of things you can do to make your basic theatre more exciting and entertaining. This section describes some of them but in slightly less detail, part of the fun is coming up with your own solutions.

The twentieth century Danish Toy Theatre publisher Carl Aller, published his "Modelteater Haandbogen", which described many ideas. These were taken up and added to by Kerstin Holmberg in the Swedish book "Modellteater Boken". Assuming that you may not have these and that your knowledge of Scandinavian languages is not that hot, we are reviewing these techniques for you here. Basically they can be considered to fall into three groups:

1. Techniques that are of value for Toy Theatre performances generally. These include coloured lighting, flying scenery, rising traps, opening curtains, panoramas, gun shots, storm effects, falling figures and ships at sea.
2. Specialised effects that are only applicable to certain plays, like explosions, fire, moonlight, rough sea and the use of magnetic props.
3. Features that are really only suitable for more elaborate model theatres such as flashing lighthouses, transparent scenes, rain, snow, projected clouds, starry nights, figures with moving arms, turning figures and smoking chimneys.

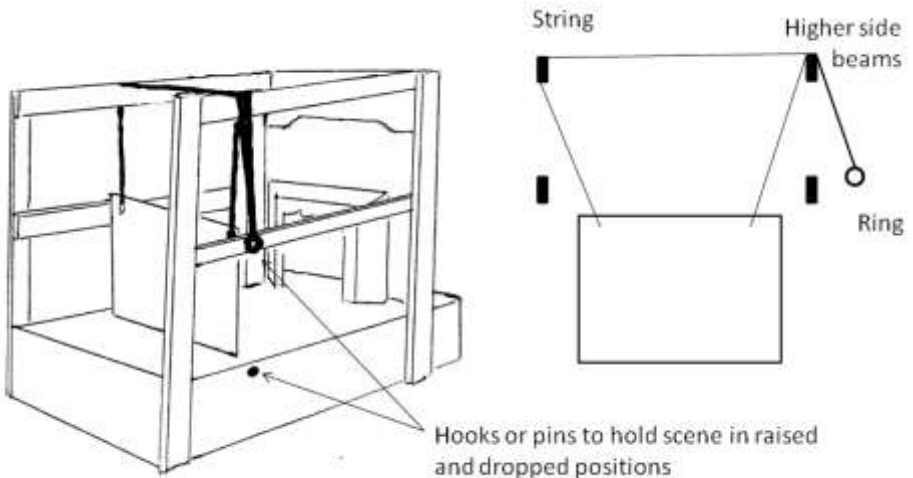
In this booklet we are only covering group 1. Group 2 features will be described in the playbooks for specific plays where they apply.

In addition to these there is another group of features that were not included in the Scandinavian publications because they feature mainly in English Toy Theatre plays, these are processions and tricks, red and blue fire. We have included these here as well.

COLOURED LIGHTING

Odd sequences in plays may benefit from coloured lighting, red for a fire, blue for moonlight, green for evil or magic. Traditionally you would have used coloured gelatine, as used in full size theatres, in conjunction with your stage lights in order to do this. The lighting system that we have proposed is not suitable for this. The simple solution is to have a powerful battery torch available. It is possible to buy colour filters for spotlights on line in 200mm square sheets. They are not expensive. All you have to do is turn off the stage lights and shine the torch through the filter. It may be easier to attach the filter to the torch to save needing two hands but some effects will benefit from a moving light.

FLYING SCENERY



In real theatres the scenery is “flown” and this method of scene changing is used in the Danish Toy Theatre. You need to add two side beams higher up. Scenes are mounted on card with punch

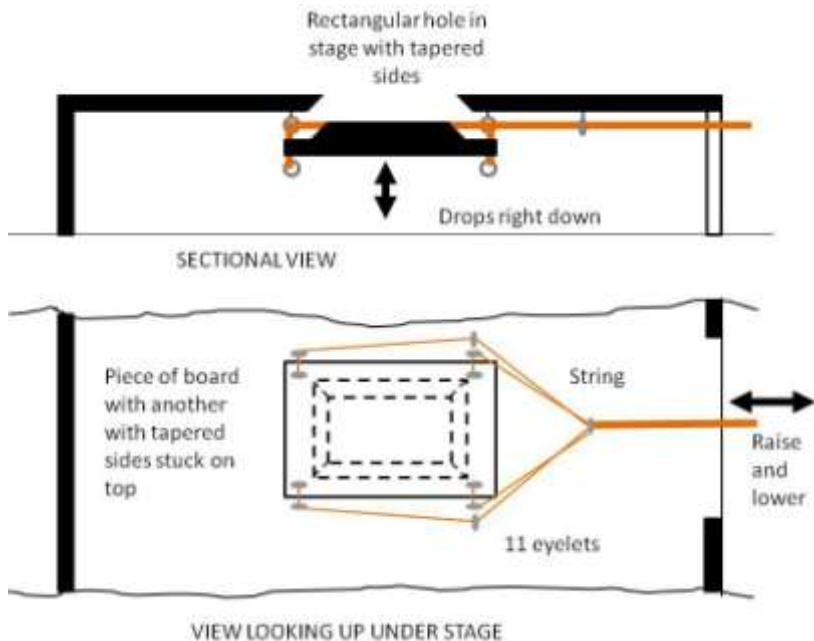
holes at the top through which strings are attached. The string is arranged so that rings at the end can be held in place by hooks or pins at the correct height, raised or lowered. You will need to work out the geometry.

Pairs of wings can be joined together with top pieces or a rod and flown the same way.

You can arrange all your scenes and wings at the start of the play, so that they are in place to raise and lower as needed. This is the advantage that makes the extra work worthwhile.

RISING TRAP

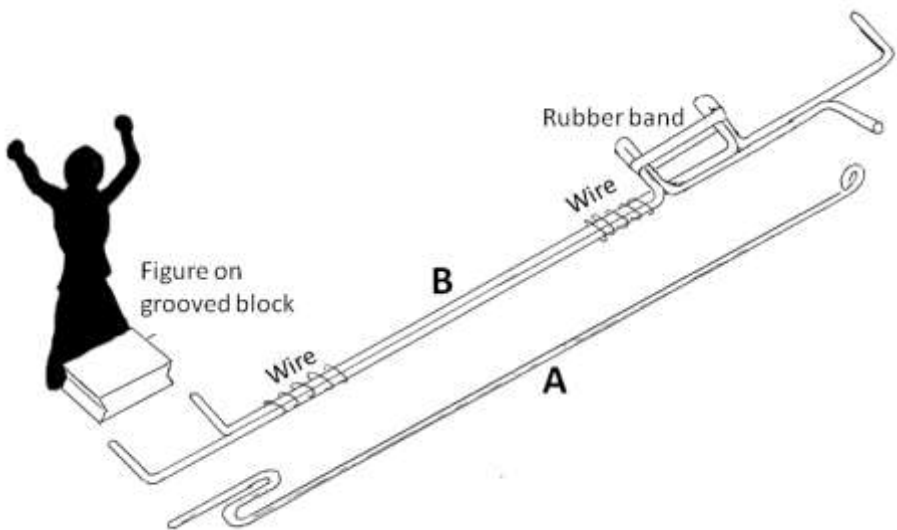
Many Toy Theatre plays have characters rising up and dropping through the stage floor and English Stages used to have trap doors for this purpose. There are a number of ways of making a rising trap but this is perhaps the best and not that difficult to do.



The trapdoor needs to be tapered so it comes up in the right place but it does not have to be a close fit, a few millimetre gap will perhaps help and not be a problem. It is held in place by an arrangement of 11 eyelets screwed in place as shown and string. You need to pull the string tight so that the trapdoor is fully closed before tying the strings together with a ring on the end. The ring must go around a pin somewhere to hold it up.

The character should be glued to a wood block and moved into place through the hole in the side of the stage after the trapdoor has been dropped and it is then gently raised up.

There is a problem. How do you move the character around once it has reached the stage floor level?



The sketch shows two solutions for special wire slides. For these an old wire coat hanger is a good source of material. Shape them using a small hammer and a vice. Slide A is a simple hook that can be used to push the character off the trap door and across the stage into the wings on the far side, or to hook it back off the stage. Slide

B is a more elaborate device formed of two pieces of stiff wire held together by finer wire wound around them. The rubber band allows the user to grip the block. To facilitate this the character block should have grooves on either side. This device allows the character to move about freely and it can be released if it needs to drop back down the trapdoor.

OPENING CURTAINS

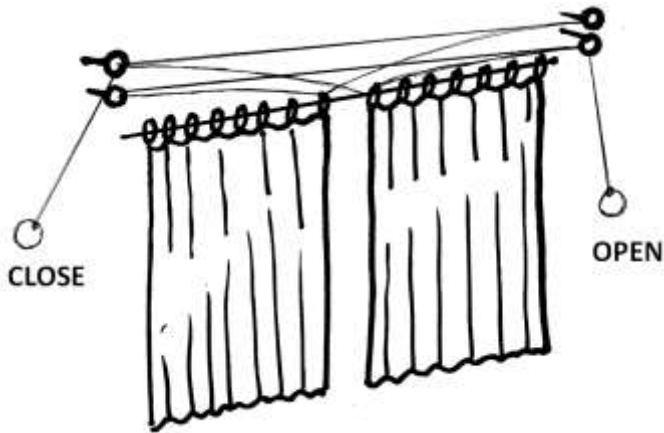
Our pictures show a traditional Pollock Toy Theatre that was supplied with a proper drop curtain.



The curtain was made from thin material seamed along all edges. It is weighted along the bottom edge by a strip of lead in the seam but this is a good use for some of those redundant Francs, Marks and Pesetas that you have kept hold of since the Euro was introduced.

It wraps around a rod that has a string wound around a bobbin on the end. Pulling on the string raises the curtain.

You might prefer curtains that open sideways. The next sketch shows how strings can be arranged to open simple curtains using an arrangement of eyelets on the back of the stage front.



PANORAMAS

Several Toy Theatre plays feature panoramas that is a long scene that moves across the stage. For example, one is used in the "Red Rover" behind a ship deck cut scene to make it look as if the ship is on a voyage.

It is possible to make them into a complex roller mechanism but a simpler option makes more sense. This is OK if the panorama is not that long.

Cut the scenes out and stick them together in the correct sequence on a long strip of hardboard of the same depth. When setting up place any spare scene immediately behind where the panorama is to cross. Use this to support the hardboard and move it slowly across from side to side. Always start and finish with part of the panorama in view.

This does mean that the back of the stage needs to be screened from view, as is explained in Appendix A.

GUN SHOTS

A toy gun with caps, if such things still exist, would work. It is also possible to buy the snaps used in crackers from craft shops. Not only do they sound right but they leave a faint smell in the air. Adults should decide if they would allow children to use these.

If you are recording your speaking parts for playback during performance then you could simply insert a sound effect of a gunshot at the appropriate place.

STORM EFFECTS

Turning the stage lighting off and on quickly and supplementing this with a bright torch flash will simulate lightning. The noise it makes can be made by rapping a tin lid, with some practice.


For thunder you could bang a suspended sheet of metal, which is how it is done in full size theatres. You need to hang it somewhere out of the way. Another option is to roll billiard balls on a wooden tray, when they hit the sides it sounds a bit like lightning as well.

You need to experiment.

FALLING FIGURES

When someone dies or gets wounded in a Toy Theatre play the directions require you take off the original figure and replace it with a fallen figure. This always looks a bit ridiculous, not that Toy Theatre is ever that realistic, because wounded and dead people tend not to move about.

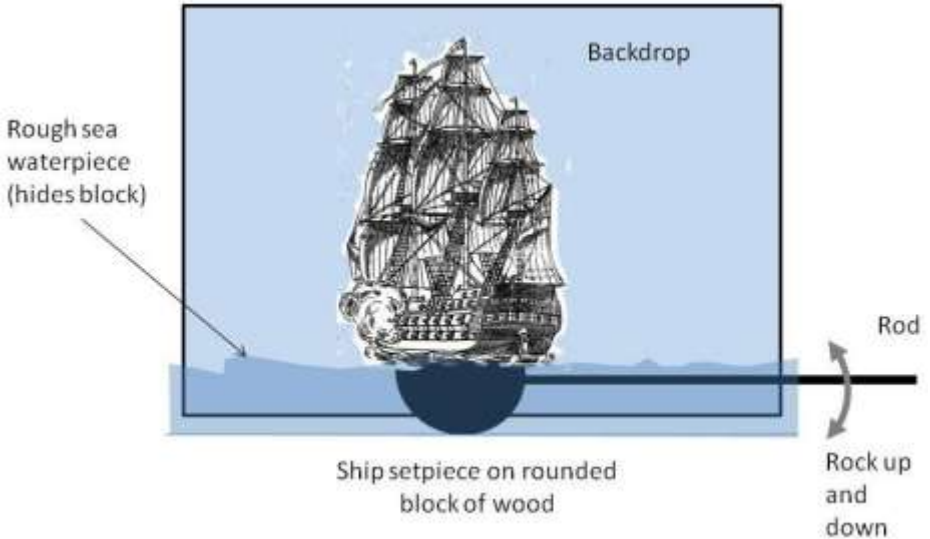
A neat solution involves sticking both figures to a square stick, when the character is supposed to change a quick twizzle of the stick gives the desired effect.

What the audience sees	How it is done
 A black and white line drawing of a standing figure, possibly a jester or a character, holding a sword aloft. The figure is mounted on a wooden stick. The base of the figure is extended to the right, and the stick is painted black to hide the transition.	 A view from behind the figure, showing the wooden stick passing through the figure's body. The stick is painted black to hide the transition between the two figures.
 A black and white line drawing of a fallen figure, lying on its side. The figure is mounted on a wooden stick. The base of the figure is extended to the right, and the stick is painted black to hide the transition.	 A view from behind the figure, showing the wooden stick passing through the figure's body. The stick is painted black to hide the transition between the two figures.

Note that the base of the standing figure needs to be extended so as to hide the fallen figure behind. Also the back of the standing figure and the stick should both be painted black in order to hide them. Do not worry about getting the fallen figure through the gap in the wings, bodies tend to remain on stage until the end of the scene!

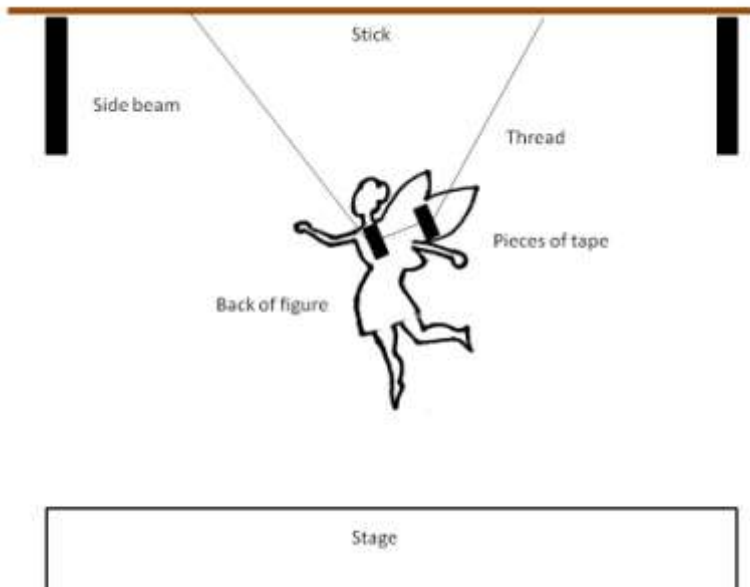
SHIPS AT SEA

A number of Toy Theatre plays feature scenes with setpieces of ships in front of a sky scene and behind a waterpiece. For example in "Blackbeard the Pirate" ships engage in a battle. To make them more interesting it is possible to make the ship rock gently by the method shown here.



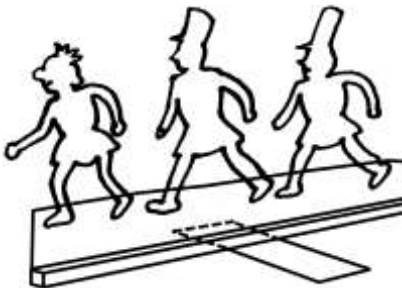
FLYING CHARACTERS

These can be suspended from a rod by fine black thread as shown on the next page. Two pieces of tape are used so that the figure remains in line with the rod. Drop the rod slowly onto the side beam to make the character fly in. Wobble the rod to and fro to give a flying effect. You can leave the character suspended while other action takes place. It is also possible to attach the threads to the rods by rings that can move along it so the figure can drop down onto the stage and remain upright until it takes off again.



PROCESSIONS

Some Toy Theatre plays, such as Aladdin, include processions. You cannot put all the characters in slides. Instead stick them to a long square rod, the length of the procession, that has pieces of black card stuck underneath to provide support at intervals (so that two are always in contact with the stage floor). The picture shows this from the back.



Push the figures in from one side and pull them out from the other.

For very long processions (more than 600mm or so) use several sticks and push them on one behind the other.

TRICKS

These are a unique feature of the English Toy Theatre reflecting a popular effect used on the full size stage. Tricks were mainly used in Pantomimes where Harlequin would hit a trick with his bat ("slapstick") to instantly transform it. The changes were often based on puns, for example the "city post" (boundary) becomes the "city post" (man).

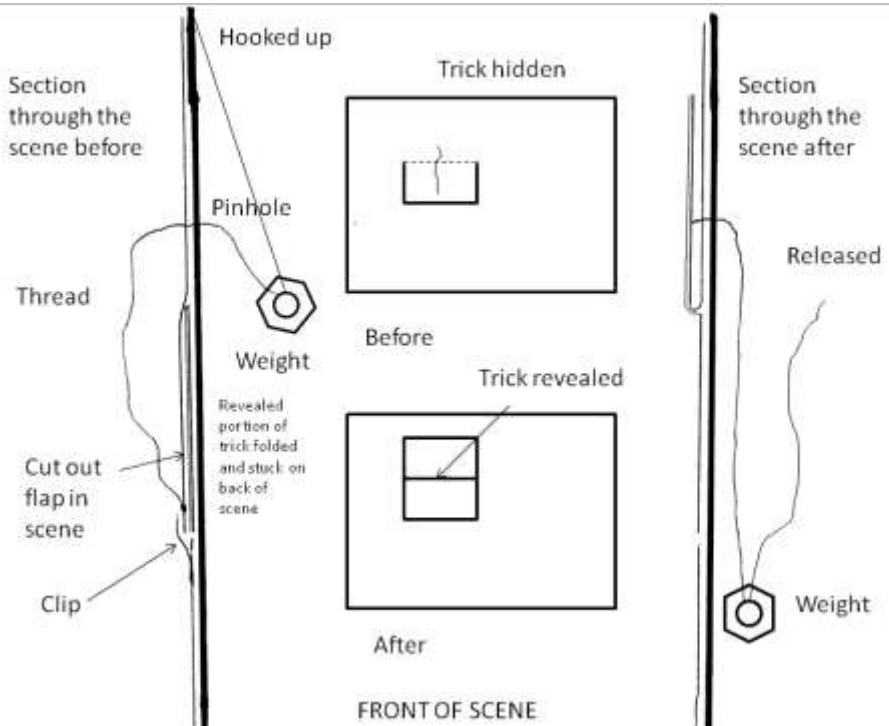
SKELT'S NEW PANTOMIME TRICKS.



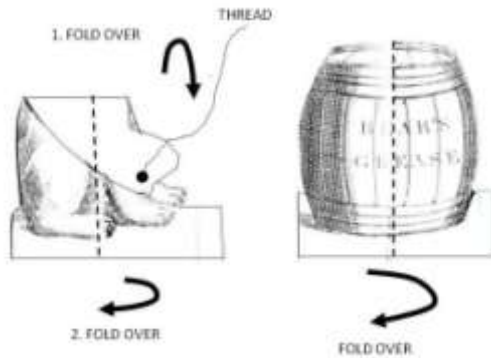
Tricks were also used in other plays for all sorts of transition effects.

There were two basic types. The "flap" and the "folding". In full size theatres they were made of flaps of painted wood.

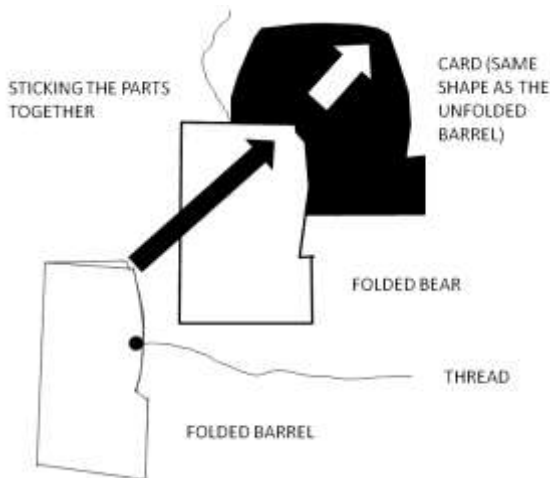
A typical flap type is shown here. Cut around the flap on the scene on the three sides and stick the folded hidden flap behind it. A small clip made of card or paper holds the flap in place. By dropping a weight behind that is attached the thread the flap opens instantly and is held down.



Folded tricks come in various shapes but if we take the bear from above as a typical example then you need to cut the two parts out and fold them along the dotted lines. Attach a thread to the extremity of the double folded bear. This type of trap can be stuck onto the backdrop or it can stand alone, which is what was intended in reality. If they are made stand alone then you need to hold them on stage with something firm like a strip of wood, not a card slide.



The two pieces are stuck, either onto a backdrop (in which case you need pinholes for the threads) or onto a piece of thick card, the shape of the barrel. The two sections should be stuck on so that the part that does not fold is stuck directly down on each piece. You may need to experiment to get it right! A second thread will help make sure it works, this can be a loop formed with the first because you need your other hand if you are holding onto the special slide or backdrop. Again a small clip, which falls off will hold the trick together until the loop is pulled.



RED AND BLUE FIRE

“Red fire to burn” is a common stage direction in Toy Theatre plays.

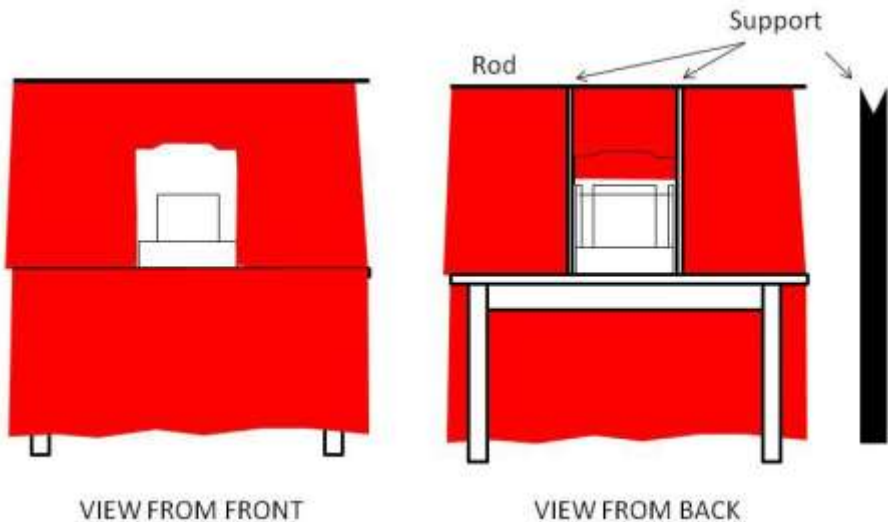
Chemical powders in tin dishes were ignited in the wings and burnt with a coloured flame.

These and indoor fireworks must not be used in highly flammable environment of a Toy Theatre. Don't confuse them either with the pellets that you can buy that burn giving off a coloured smoke. These can only be used outdoors, especially since the smoke will stain everything it comes in touch with including your skin and the house decorations!

Instead use coloured light as described on page 17. If you need a flame effect simply waft your fingers in front of the light, simple but effective.

APPENDIX A. SCREENING THE TOY THEATRE

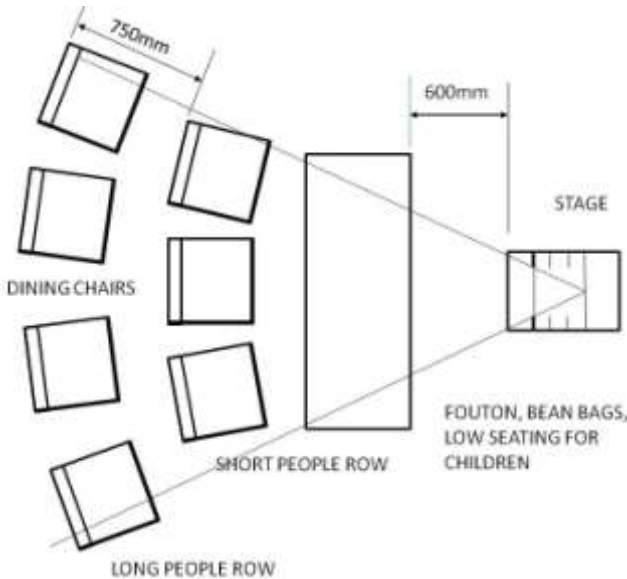
It was usual practice to screen the performers from the audience so as to help create the illusion of watching a miniature theatre. In recent years however it has become a fashion to dispense with the screen so that the antics of the performer become part of the show. At the other extreme you can arrange your stage in a doorway or in a serving hatch between rooms (if such things still exist). This has the disadvantages however of coping with the thickness of the wall and being cut off from audience reaction. You really need to know how your audience are reacting and respond to this.



A happy medium is the arrangement shown here. The stage is placed on a narrow low table. It needs to be narrow because the performers must reach both sides from the back. It needs to be low so that the youngest children can see. Drape a curtain in front. Another curtain with a cut out around the stage front is supported from a rod by battens with a vee cut in the top which are tied to the sides of the front uprights. The curtains should be plain and not distract from the stage itself.

APPENDIX B. ARRANGING THE SEATING.

The classic modern lounge with low seating scattered about is OK for large screen TV but hopeless for Toy Theatre. It is important that you think carefully about seating and its arrangement, try it out yourself. The arrangement below allows for restricted view and the need for everyone to be able to see with staggered seating.



A family of ten is accommodated here. Servants, co-producers and people who have seen it before can stand at the back. The most important thing is to think about the amount of stage that people can see and the need to be not too far away to see actors who are only 60mm high.

The secret of a successful Toy Theatre performance is to take care of your audience.

Finally, something that was not an issue in Victorian times, you need to make sure that everyone has switched their mobile phone off, and that includes you!

APPENDIX C. TOY THEATRE PLAYS

There are still two Toy Theatre shops in London where you can walk in and buy plays over the counter, these are Pollock's Toy Museum in Scala Street and Benjamin Pollock's Toy Shop in Covent Garden. These also sell plays by post, as do Pollock's Toy Museum Trust of London, Hugo Brown of Ely, The Toy Theatre Gallery of Glasgow and Joseph Hope Williams of Wheathampstead. We also provide many plays free on line for you to download and print off.

Its also worth noting that the smallest size of Danish Toy Theatre characters and scenes (size D) is also a perfect fit for the Grand Theatre.

You can also produce your very own plays! Short pieces with lots of action and not a lot of dialogue are best, so most modern plays are out. Classic fairy tales, the Arabian Nights, Jules Verne adventures, science fiction and good old Harry Potter can all inspire dramatic productions.

Unlike many other creative hobbies the materials are cheap and the only limitation is your imagination!

INDEX

- Act drop 12
- Aller, Carl 16
- Audience seating 32
- Blue fire 29
- Coloured fire 29
- Coloured lighting 17
- Curtains 12
- Drop curtain 12, 20
- Explosions 16
- Falling figures 22
- Finished theatre 1
- Flat stage front 4
- Flying characters 24
- Flying scenery 17
- Footlight shield 13
- Footlights 12
- Gelatine filters 17
- Gun shots 22
- Holmberg, Kerstin 16
- Lighting 12,13,17
- Lightning 22
- Magnetic props 16
- Materials needed 2
- Mobile phones 32
- Moonlight 16
- Mounted stage front 4
- Moving characters 15
- Opening curtains 20
- Orchestra strip 9
- Panoramas 21
- Plays 33
- Printing the sheets 2
- Processions 25
- Red fire 29
- Rising trap 18
- Rough sea 16
- Safety issues 2
- Scenery grid assembly 9
- Scenery grid parts 8
- Scenery grids 10
- Screens 30
- Seating, audience 32
- Ships at sea 24
- Slides 15
- Stage base 7
- Stage floor paint 7
- Stage front 4
- Stage front attachment 6, 9
- Storm 22
- Thunder 22
- Tools required 3
- Top drops 14
- Torch 17
- Toy Theatre shops 32
- Trapdoor 18
- Tricks 26