FROM THE ARCHIVES

Menagerie Top Design and Construction

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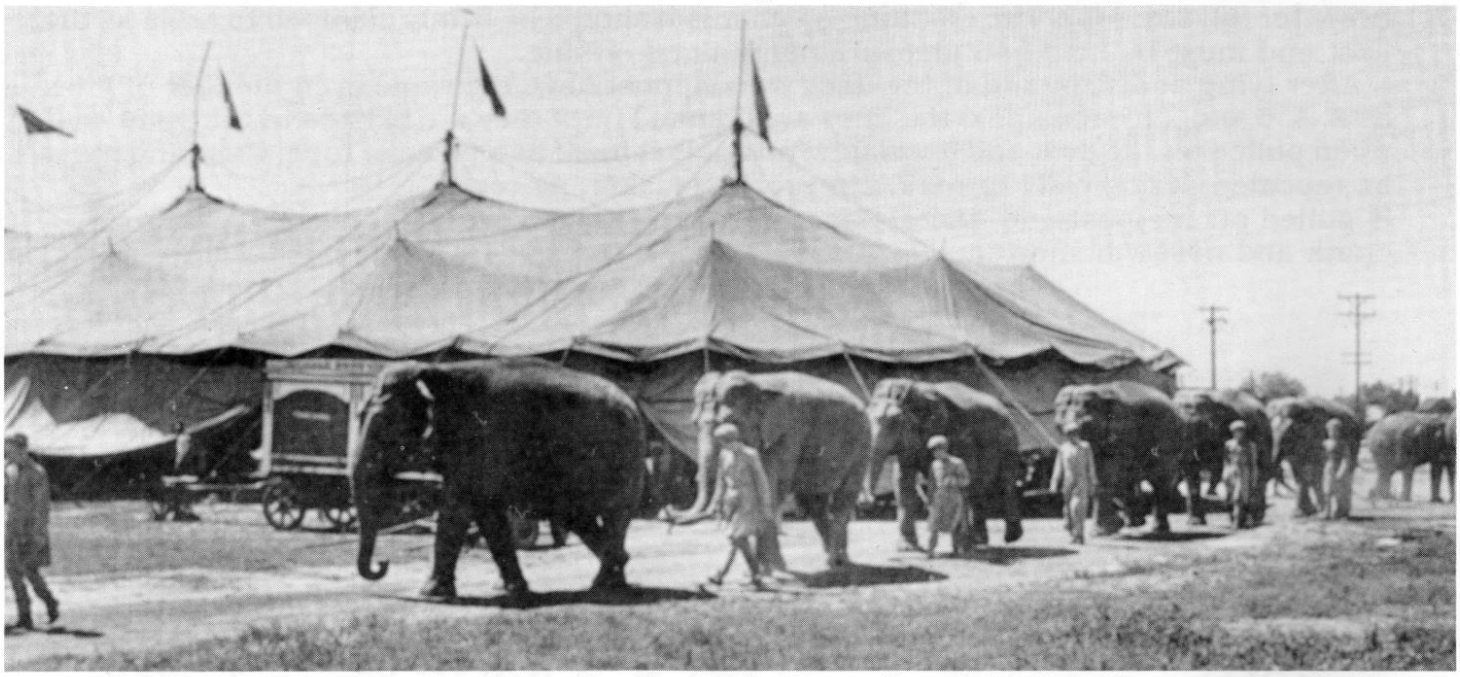
PART FOUR

Refer to Part One and Two for Various Figures Used in This Part Four Article



"Bulls" parade through backyard from the Menagerie Top on the way to their big moment under the "Big Top." A typical scene to add to your layout. A 1949 Cole Bros. Photo. Reprinted from the "Sawdust Trail."

SIDE POLE SOCKETS AND JUMP ROPES

Refer to **Figures 7, 7A, 7B** line B-C which is the side pole line on the round ends. **Figures 8, 8A, 8B** line B-C shows the side pole line for the middles. In this step we will refer to these lines.

After lacing up the top I never unlace it again as it can be finished now laced together. It is a little bulky to work with but you whould have no trouble.

You will need about 90 jump ropes for the side poles. This should take care of any booboos you make and a few spares.

Out of the lighter twine you have purchased and which was used for lacing the top cut 90 jump ropes 14" long. Dip one end of each of these in model airplane cement and let dry.

Place the top upside down on your work table. At one corner of any of the laced up sections punch a hole upwards with your ice pick on the piece which is now on top at the intersection of the side pole line and the lacing center line. Force this over a SE44 (long) eyelet which has been placed on the eyelet set with a diagonal pliers so there is room on the shank of the eyelet for the jump rope. This shouldn't be any trouble if the cloth at the corners had been "thinned out" as described previously.

Take one of the jump ropes you have cut and on the end opposite the cement tie an overhand knot in the rope. Place the knot over the eyelet shank and tighten with your hand on the long end and a pair of diagonal pliers on the short end. Then set the eyelet. Test the rope for cutting and cut off the short end. It is best to place the knot on the eyelet shank so that the knot itself is on the side of the shank towards the eave edge of the cloth. This way, when the jump rope is tied to the side pole it aids in holding the pole in place better.

On each corner of the cloth where the piece is now on top a SE43 eyelet is placed just over the SE44 eyelet to accomodate the pin in the end of the side pole. Obviously a jump rope is not needed in this piece of cloth.

Each round end piece has a SE44 eyelet and jump rope placed wherever the side pole intersects a radian sewed in to simulate the rope reinforcements. The middle pieces have an eyelet and jump rope at every other intersection of the side pole line and line extending from the ridge to the eave only. Later we will deal with these.

DOUBLE GUY ROPES

Cut 90 ropes from the No. 6 seine twine 24 inches long. Dip every end in the model airplane to prevent fraying.

Starting at one corner of one piece with the top upside down punch a hole in this corner working the ice pick up from underneath at a point on the lacing centerline and half-way between the storm flap (trim) and the eave. Place an eyelet on the eyelet set and work the cloth down over this. Take one of the ropes just cut and place an overhand knot in the center of this rope. Work down over on the side of the shank opposite the eyelet so that the knot itself is eave edge. Pull the rope tight and set the eyelet.

Whenever there is an eyelet and a jump rope repeat with the double guy rope. On the corners of the individual pieces place a double guy rope on both the top and bottom piece. This makes four ropes on each lace line. Again check the ropes for being cut with the eyelet.

"Setting Side Poles and Guying Out."—Note the two ropes which form a "V",—one is used for guying while the other goes to the stake and is being tightened on stake while crew is stretching. This is double guy rope. The rope between the double guy is the single guy rope. Also note pole sockets and pole pins, and their distance from the edge of canvas. A Templeton Photo.

SINGLE GUY ROPES

Cut 90 ropes out of No. 6 seine twine 12 inches long. Dip one end of each in model airplane cement and let dry.

Midway between every double guy rope and midway between the storm flap and eave edge is placed a single guy rope. On the middle pieces there will be no sewing with colored thread at this point. Again place a SE44 eyelet here with the guy rope only with the overhand knot again tied on the opposite end from the cement. Check for cutting and cut of the short end.

Your tent should now be ready for setup except for one more important item. Bale Rings.

BALE RINGS

On a full scale top of the larger sizes it is estimated the weight of 50 elephants would represent the pull on each bale when the top is guyed out. From this statement it is obvious that the bale ring must be built to "Take it".

I use a bale ring 1¼" O. D. in diameter. Admittedly this is oversize but when you set up and start trying to thread center poles and main falls through it you will be glad it is oversize. For bale rings I use 3/32" welding rod. Wind this over a form as you would a spring and cut off to form the ring. Where the two ends of the ring are joined you must **silver solder**. Ordinary soft solder just will not hold.

Through Ken Whipple I have been able to obtain bale ring chain which is strong enough to take the strain of the guyed out top. It is obtained from: Charles A. Cole, 1355 Church St., Ventura, Calif., or local hobby and hardware stores.

Use the 11 links per inch size. Cut the pieces for each half of the bale ring 10 links long. With a piece of spring brass wire from a ring large enough to go around the bale ring and through one of the links of this chain. Place on the bale ring itself and silver solder. Put one of these on each side of the bale ring. Join the two ends of the chain together by forming a ring out of spring brass and threading it through the two end links of each piece of chain. Silver solder. This is the ring into which the hook of the main falls engages for pulling up the top.

INITIAL SETUP

To set up the top described a baseboard 5 ft. by 12 ft. is needed.

For side poles cut 3/16" diameter doweling 7" long. Refer to the article center poles, rigging, and guying out for center pole description. It is not within the scope of this article to discuss construction of center poles here.

Set up your top in the usual way. Be sure to guy it out tight as it can take it. Now forget the top for the next two weeks except once a day go all the way around and tighten the guy ropes to give it a good stretch out. On the initial setup you will probably be disappointed with its looks. This is only natural because it needs a good stretchout to pull it into its final shape. As the tent will stretch and give in spots I would recommend using nails for the first setup. Afterwards 1/8" wooden doweling can be used for stakes.

Bale Ring shown here hanging loose on center pole rigging. Note Mud Block under pole. The winch on this pole was used on RBBB B.T. poles and can be disregarded for this article. A Templeton Photo.

QUARTER POLES

After the top has been set up and stretched out for two weeks we can think about quarter poles. Your baseboard should have been marked where the butts of the quarter pole will stand. Measure the distance from this line to one of the quarter pole sockets in the tent. Add about 1" to this measurement and cut from a piece of ¼" dowel. Set it in the top and check for length. They should cause the tent to "bug out" slightly at each quarter pole but not too much. Use your head and determine what looks right. Keep on cutting off the length of the pole until it appears to be the right length. Then cut the remainder of the blue quarter poles to this length. Set them in and see how they look.

Repeat the above for the red quarter poles. Again use the same size dowels as for the blues.

Now you can start your sidewall. It is not the intent or scope of this article to go into sidewall construction so you will have to use your own idea. The model sidewall made as prototype sidewall is too hard to set up so I use a compromise type which has an eyelet in the edge which fits over the sidewall pole. Remember where sidewall joins there is an overlap the distance between two side poles. Sidewall comes in various lengths so do not make one continuous piece to go around the whole top. This will not look right.

One more thing in conclusion. Mark your top at each intersection so that if you ever want to unlace it you can put it back together in the same order it was originally laced together in. Also by marking at the side pole line you can also mark the sidewall so it is always put together in the same position.

I have found it to be advantageous to place the stakes out from the side poles a distance equal to the length of the side pole minus one inch. This gives a more acute angle between the top itself and the guy rope and tends to aid in holding the side poles in place.

This completes this article on tents. I have tried to take it step by step and explain each step fully so it is clearly understood. Sometimes this has called for monotonous description and repetition. With the help of this article you should be able to make any round end top using the design methods described in the first part of this article. So happy sewing; I'll be seein' ya on the lots someplace.

OMAR THE TENT MAN