

TECHNICAL SOURCE GUIDE

RIGGING FOR VERTICAL AND HORIZONTAL MOVEMENT

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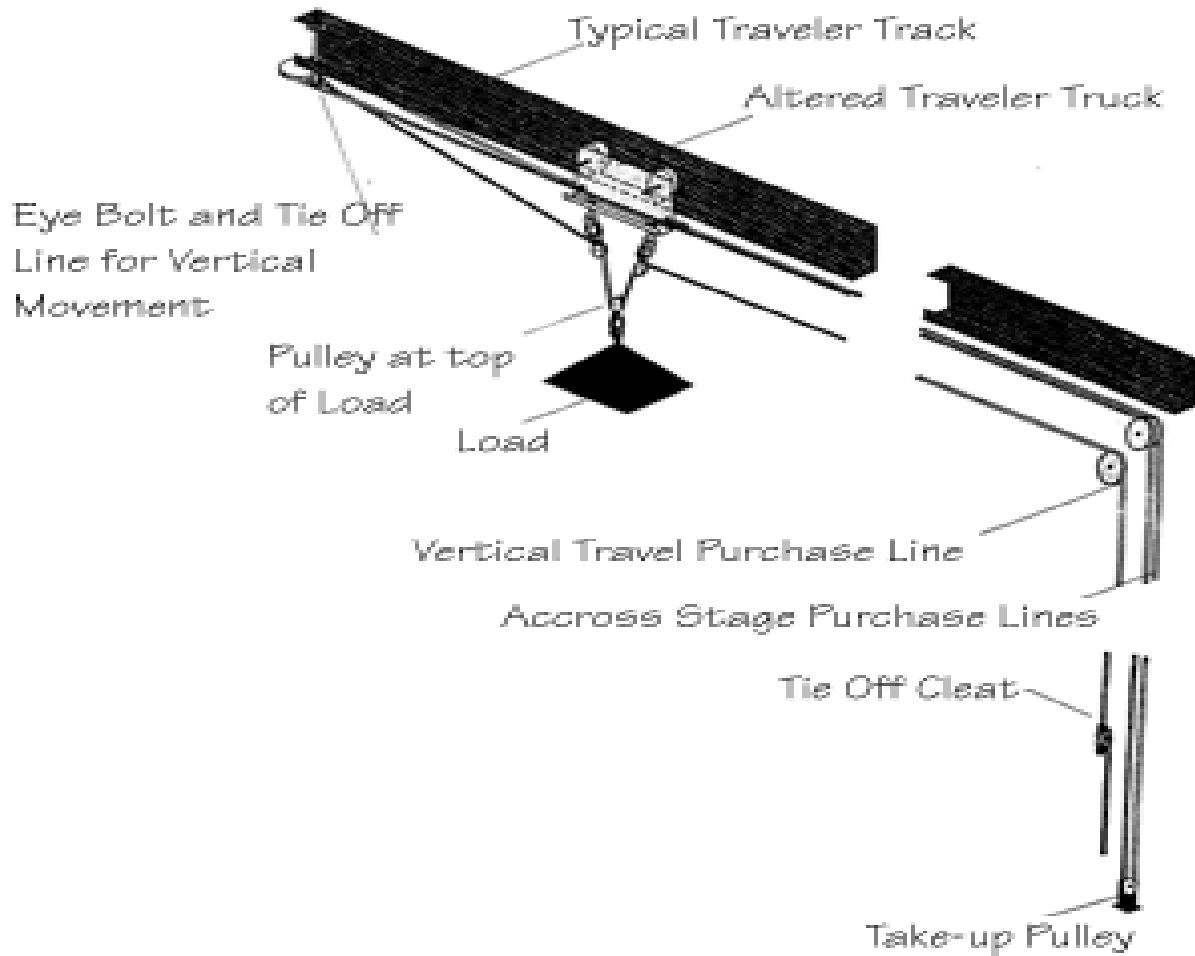
For our recent production of "Something's Afoot" at Cardinal Stritch College in Milwaukee, the script called for a chandelier that would travel almost the full width of the stage, including vertical movement into the floor and out to trim. This was somewhat problematic in that our proscenium theatre has no fly system or fly loft space, and everything is typically dead-hung to the ceiling. Within tight budget constraints and a limited labor pool, we needed to devise a safe, secure and cost-effective system.

Using an existing 40' traveler track and its associated hardware, we were able to adapt the system to accommodate our needs. Two actions had to be considered: side-to-side (traveling) motion and the up-and-down motion. These motions needed to be independent of one another. The side-to-side or traveling motion was accomplished by using one "truck" from the traveler track to carry our chandelier. By attaching the chandelier to the truck and a line at either side of the truck (in the normal curtain-pulling manner), we could achieve side-to-side travel.

To achieve the up-and-down movement, a pulley was added to the top of the chandelier. We quickly realized that if we also added a pulley to the bottom of the truck and passed a line through it to the chandelier, it would climb as the chandelier moved away from the operator and fall as it moved toward the operator. Therefore, closed eye bolts and washers were added to the truck and pulleys were attached to the eye bolts by means of "quick" links. Also, an eye bolt was added at the off-stage side of the traveler track opposite the operator end. This gave a dead end in which to attach the non-moving side of the vertical control line. By adding the pulley to the top of the chandelier, the chandelier could travel side to side without going up and down, or up and down without any side-to-side travel. Because the pulley on the top of the chandelier gave the operator a two-to-one advantage, no counterweight was necessary. Quarter-inch braided cotton was used as a control line for the up-and-down motion. This enabled it to have a 100 lb. working strength, which was more than enough for our needs even with a 10-to-1 safety margin.

Although minor movement was possible by the truck when the chandelier was in vertical movement, no locking device was used to secure the line. This was instead achieved by the line operator. In general, the movements of the chandelier were accomplished by two operators. A cleat was mounted on the stage wall as a tie-off for the chandelier when it was not in motion. The only drawback to this design was that the chandelier had a tendency to spin when the line, which was twisted, passed through the pulleys. We were able to minimize this effect by using braided cord.

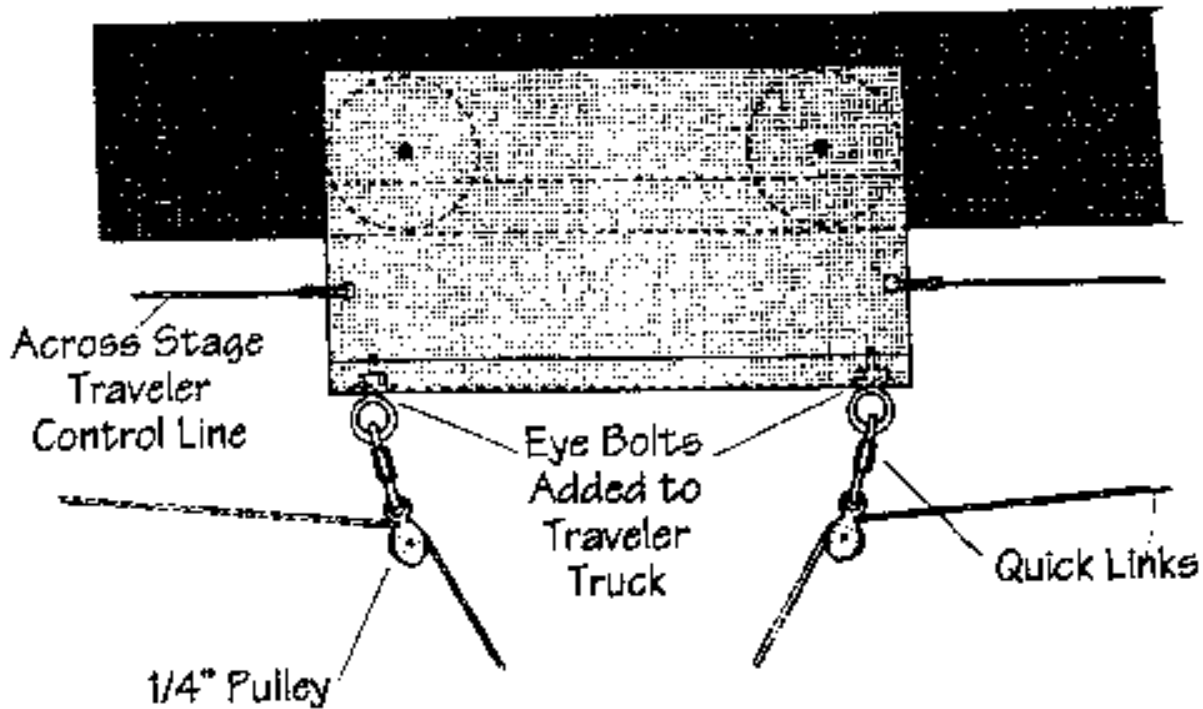
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