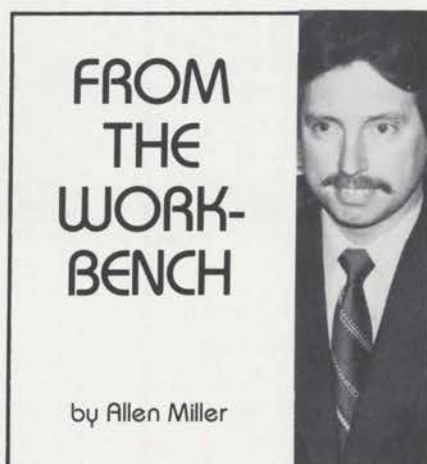


Charlie Schubert has been back with the Wednesday Night Gang during the past year, working on the museum's player piano and nickelodeon. Charlie was in charge of the moving, rebuilding and installation when our Wurlitzer was moved from RKO Keith's to the Fairgrounds in 1967. Bruce Carter has been printing a little sheet called the "Olio" which is passed out at each program. In it he introduces an active member and his functions in the club, tells about the artist, reveals coming events, and gives memberships a plug. Bruce deserves credit for giving us something new and different.

CHARLIE RICH □



Technical Tips

This is the first in a series of short technical columns in which I hope to address common technical problems, giving commonly accepted solutions. Some subjects may seem to be very simple, while others will be quite involved. The author welcomes comments and alternate solutions from other technicians.

Tremulant Rebuilding

The one piece of apparatus in a theatre organ which can quickly make or break the entire sound of the organ is also, perhaps, the least understood. The tremulant has taken on a certain mystique, only because so many factors affect its operation. Often when a tremulant fails to function properly, or won't accept adjustment, the blame is placed on something else in the system. In some cases, this is justified, but very often, the tremulant itself can be the culprit.

I can almost guarantee that a

50-year-old tremulant won't work right, and will be improved by being properly rebuilt. Two maladies seem to be common today. First of all, the original rubber cloth has become hard, or even brittle, sometimes even leaking at the folds. Just stop and think about how many times that pneumatic and pallet valve have worked over the years. One manifestation of stiff rubber cloth is that the trem speed will change greatly with changes in temperature. (Some change is normal because the density of the air in the system affects the tremulant tuning.) A stiff tremulant also requires more pressure to work reliably.

Another problem common to original-condition tremulants is that the leather on the pallet valve facing has usually come unglued from the felt backing. This is caused primarily by the fact that hot glue gets brittle with age, and all that beating doesn't help matters. When gluing felt and leather together, you try to use glue thicker than normal, and to spread it thinly so that it doesn't soak into the felt and become hard. This, of course, compounds the problem.

Loose leather on the pallet causes some weird problems which tend to act like windline length disorders. Usually, the trem will either run at only one speed, or may decide to run either very slowly or at double speed, jumping from one to the other as you try to adjust it.

You can detect stiff rubber cloth usually by sticking your fingers down the inside of the muffler (if there is one) and feeling it. Sometimes you can even hear the rubber crackle inside the cloth as you bend it. Loose pallet leather can be seen, as it blows up, trying to keep the pallet hole sealed as the pallet drops. During operation, the leather blows up like a balloon and flops up and down in the valve hole.

Allen Miller, formerly Assistant Vice President of Austin Organs, Inc., now owns his own business installing theatre pipe organs, building replica pipework, doing tonal finishing and consulting, and designing and producing related electronic organ systems.

It is easy to get the impression that the pallet valve was designed this way to give a gradual opening to the valve, but this is not the case. The leather was originally glued down. Some builders even fasten a thin wood plate slightly smaller than the valve hole to the top of the pallet leather to hold it together, and this is one way to quickly remedy the problem. However, such a "fix" is not complete because the leather still will not be glued at the edges where it seats.

The pallet is easy to fix. The correct "fix" is to replace both the felt and leather with identical material. This is usually a soft red felt 3/16" to 1/4" thick, with white alum-tanned gusset or valve leather glued smooth side up. Often, the leather is glued down the sides and partially under the pallet valve and tacked at the corners. If the original valve surface was not done this way, this is one area where deviation from the original method is usually recommended. I recommend using thick plastic-type glue, such as PVC-E or air-thickened Elmer's Glue-All.

While I normally recommend duplicating original materials, I have found that a lighter weight cloth on the tremulant bellows gives better results and less tendency for the speed to change with temperature changes. I highly recommend WINE MOTOR CLOTH, currently called No. 1052 AEOLIUS MOTOR CLOTH, .0125" thick, available from Player Piano Co., Inc., 704 East Douglas, Wichita, Kansas 67202. This rubber cloth is also excellent for covering outside blow pneumatics, such as those found on percussions and traps.

Be careful to exactly duplicate the original bellows opening height when recovering it.

When rebuilding a tremulant, don't overlook the primary box and stop pneumatic, and give the inside of the tremulant a good cleaning. Inspect the gasket leather. If there is evidence of leaking (black soot streaks) or if the leather is powdery, replace it with soft gasket leather (packing leather). Organ Supply Industries carries an excellent double-buffed packing leather.

While rebuilding a tremulant may not solve all of your tremulant problems, it is the obvious place to start if it has never been done, or if inspection indicates it is time to do it over. □