

# OWNING YOUR OWN ORGAN

... By G. Edgar Gress

This is the second of the series of articles designed to help those readers who are desirous of learning the fundamentals of organ construction in terms that can be readily understood and without previous technical experience or knowledge.

## Part II. Reconditioning Your Organ

**W**ITH NO ROOM in the garage for the car, no room in the basement for your wife to wash, and six ranks of pipes under every bed, you're just beginning to experience the joys of amateur organ building. An organ looks beautifully compact—put together. Take it apart and it won't fit in ten times the space! However, this isn't your only problem. The real drudgery is about to begin in earnest, reconditioning every part to the condition it was in when it left the factory twenty to thirty years ago.

This reconditioning process, while the most tedious part of the whole project since it produces few tangible results to look at, is nevertheless the most important and must not under any circumstances be rushed or evaded. Repair work is not easy under ideal conditions, but to attempt it after the organ is installed is hopeless and will probably mean taking everything apart to do a job that should have been done in the first place. Nothing is more discouraging than to try to keep up a running battle with decomposing leather or dirty magnets. By doing the job right the first time your brain child will give you a lifetime of trouble-free service. So, taking the various parts one by one, here's what you have to do:

### The Blower

Clean thoroughly, inside and out. Unless the finish looks really spotless, sand it down to the bare metal and give everything two coats of a good rust-resistant paint. If there's a filter cloth over the intake, replace it. Check the motor bearings and also the ones in the blower itself, if there are any; ordinarily they'll need to be replaced. The outlet valve flaps can be replaced with heavy rubber cloth, and the felt piece where the shaft enters the main housing also has to be renewed. New brushes *must* be installed in the generator, and a new drive belt should be provided. The commutator may need to be sanded down (but *not* with steel wool!) and a set of bearings may be necessary. To be really fancy, one can omit the generator in favor of a selenium rectifier of the same rated amperage—rectifiers are literally foolproof, while a generator requires periodic attention. Finally, obtain new felt pads to put under the blower and generator.

### The Reservoirs

Since these are of wood, it's time to go into the techniques of cleaning wood surfaces. Organ wood is of three kinds: finished (usually with shellac), sized (with a coating of glue—as for example the insides of wind trunks, reservoirs and wood pipes), or unfinished. Only on finished wood may water be used, and then only sparingly. Take a bucket of lukewarm water and pour in some powdered soap or detergent capable of cutting grease and soot. Into this dip a rag. Wring it out and use it on a moderate-sized area, then immediately wipe the wood dry with a second, dry rag. Assuming that all loose dirt has been already brushed off, you should come up with a gleaming result that really looks

like new. Sized or unfinished surfaces, which invariably means inside, never outside ones, must be well brushed and then wiped with dry rags to get rid of all loose dust. In work of this kind, a tank-type vacuum cleaner with a flexible hose is extremely useful, and can later be put to work providing wind for test purposes.

With the reservoirs cleaned, their top boards can be taken off and the interiors brushed and wiped out. Check the valves to see that their leather is pliable and that they work freely. Lubricate their guides with graphite to forestall any tendencies to squeaking. Next, check the leather all around the edges for cracking, leaks, and pliability. Ordinarily this will not need replacing, but if it does you'll need some leather of both the regular and the soft corner types, and a good grade of hot glue in a gluepot. The chances are that only the outside leather will need replacing; if the inside does, this means taking the reservoirs apart and starting from scratch, and your best bet is to get a friendly organ man to show you the techniques first-hand.

### The Chests

After cleaning the outside, taking due care not to drip water into the valves, unscrew the top and bottom boards and stand them to one side. Assuming that you have a Wurlitzer organ on your hands, you'll see that under each rank of pipes runs a separate compartment with a row of pneumatics along one side. These are glued in place with a gasket of heavy leather underneath. Using a wide, sharp chisel, or better yet, a plane-iron, slice through this gasket and each pneumatic will drop free. Notice that there are three widths of pneumatics—mark plainly which type goes where. With the plane-iron, carefully scrape off the remains of the gaskets inside the chest, down to the bare wood, without marring the surface. Blow out all the dust from inside the channels.

All the old leather must be removed from the pneumatics, and by far the best way to do this is with a power sanding disc. Sand all four sides and the bottom, but be careful not to go too far. Keep the interior cloth hinge intact. Remove the small felt-padded bumpers which engage the pallet wires, and glue on new felts before putting them back (these go back on only when the releathering operation is completed).

Releathering is not difficult once you get the knack of it, but it is a tedious job and demands careful workmanship. First measure the distance all around a pneumatic of the size you're working, and add to this an amount equal to the width. Cut the leather into strips this long, and as wide as the pneumatic needs to open. Hold the pneumatic in your left hand, with your index finger in between its top and bottom to hold it in its wide-open position. With a knife, coat the three sides away from your hand with glue. Apply the leather, wrapping it around one side at a time *starting with the back*. Next, keeping the flap of unglued leather

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# Reminiscing\*

By Floyd Roberts

## Don't we all?

TO THOSE OF YOU who remember the tremendous popularity of the Pipe Organ and its perfect accompaniment to the silent moving-picture maybe this article will take you back to thirty or forty years ago when each theatre ad would box out a portion to print something like "Special Music Score, Jerrie McKinley at the Organ." Or perhaps it was Henry B. Murtagh at the organ, and if you WERE lucky, Jesse Crawford. But whoever the organist, you never forgot the theme of the picture. If it was "East Lynne" and Ann Harding was the star, then the reason you saw strong women and big men, tears rolling down their cheeks, was that the Organist played *Then You'll Remember Me* all through the picture, especially when the sad parts came on. Or say you saw Wallace Beery, Richard Arlen, and Louise Brooks in "Beggars of Life" then you were haunted for days by its theme *Side by Side*. Maybe it was Pola Negri and this time it was in her latest "Loves of an Actress." Then it was a Chopin *Nocturne* which wove its spell over and over around you. And if the picture starred Mae Busch, Eugene O'Brien, and the lovable child star Ben Alexander in "Frisolous Sal" then you knew that part of its charm was from the Organist's way of playing the old song *My Gal Sal*. And in the cowboy pictures with Ken Maynard, the *Light Cavalry Overture* sure set your spine tingling, and you were on the edge of your seat and the organist hoped he would stay on his horse as the villain almost got the girl. But you never forgot those days of pipe organ.

AND IF YOU were an organist (and where have all of the thousands gone?) then you will recall how you closed the

\* Written for "The Pariscope."

out of the way, lay the pneumatic in your left palm, finished side down, and apply glue to the bare side and to the leather on the back. Then wrap the leather around, making it overlap in back. Lay the whole thing aside to dry, and do another one. Later, trim off the excess leather, punch out a new gasket (the punchings from the large piece around the hole are just right for the small piece at the back end) and glue it on, put back the bumper piece, and wiggle the leather around to break up the hardened glue in the hinge.

One important point to watch is that no glue must get on the leather or drip on to the inside surfaces. If this happens the leather will be stretched too much at one place and the pneumatic won't last long.

With all the pneumatics completed, glue them back in place, being very careful to line them up with the guide lines in the chest. When they're dry, test each one by holding your finger over its channel and trying to pull it open, to see if it leaks.

Next, go to work on the top boards. Take off all the pallets and clean the expansion chambers thoroughly. Scrape off the old pallet leather and replace it with felt-and-leather material sold by organ supply houses for the purpose. This step is important, and will save no end of trouble with partial ciphers due to hardened, out-of-shape pallet leathers. Replace the pallets and lubricate their guides with graphite. Then replace the whole top board, with the chest on its side so the pneumatics drop open and the pallet wires fit under the bumpers properly. Adjust each pallet wire by bending it slightly, until there is a little free play in

swell shutters in front of the organ pipes, and softly played a vox humana solo accompanied by a soft flute or the tibia clausa, and you made the audience feel what you saw happening on the huge screen in front of you. And within easy reach was your cue-sheet which you had carefully gone over and memorized, and along with it the music you were going to need, the Dramatic Andantes and Agitados, the Hurries, the Galops, the Misteriosos, and the latest song hit.

BUT HOW MANY of you can remember today after all these years of the too noisy blatant sound movie accompaniment (canned actually) the time you had to imitate a real train, and because you were sitting at the console of your mighty Wurlitzer or your powerful Robert Morton, you knew that all you needed to make the audience hear that train was to use the Bass Drum on the pedal, playing it with your foot, and using one hand on one of the keyboards (and you might have anywhere from two to five of these) and adding the Snare Drum, well, just by the speed you moved your hands and feet the train sped along or ground to a stop. Or if the picture called for an airplane scene (and they were being shown real often lately) all you needed to add to the Snare Drum was an 8-foot Tuba, but be sure and shut off the Tremolo. The action of the picture changed so swiftly, now the scene was a prize-fight and you needed a gong, well you would never use a chime by itself, that was only for a Cathedral Scene, but a chord struck in a precise sharp manner and you must remember to keep the Swell Box wide open. And oddly enough to imitate a Hand-Organ you needed at least six stops on at one time, but you did not use your feet. And to imitate a telegraph key or a typewriter that was about the easiest of all, all you required was the Chinese Wood Block from the trap division of your organ. And the piano, that was easy, the heroine could play any love song to the hero, all you had to do was hit the stop tablet marked piano and if your organ was expensive and the theatre where you played the finest, you might even have a Steinway Grand piano concealed behind the organ grille. Your fingers, the organ keys, and electricity did the rest.

Those were the days!

its closed position and everything works freely.

The bottom boards, containing the magnets and primaries, must also be thoroughly cleaned, with a soft brush and the vacuum cleaner. Take off all the magnet caps and thoroughly clean them out, clean off the magnet itself and polish the armature. Test the magnets and replace all dead ones, and those of less than normal resistance.

Unscrew the board covering the primary valves and with a twist drill or hand chuck, twist out the valves and wires, keeping them in order. Brush them off and brush out the spaces they fit into. Remove and re-leather the primary pneumatics, following the same procedure outlined above with the exception that since these are square, not book pneumatics, there is no hinge and the leather overlaps about half the length of one side. Needless to add, the leather used on these small pneumatics must be the thinnest obtainable.

Replace the primaries, screw in the valves adjusting them as you go, and replace the cover board with the valve wires all in their holes. Then screw the bottom boards back on the chest, turn it upright and temporarily feed it wind from the vacuum cleaner, which ought to be good for 8- to 10-in. pressure. With a test wire, operate each note to see that everything is working perfectly, with no leaky valves, no dead notes and no ciphers. You've just finished one chest. Now you can start on the others. After that comes the relay, percussions and traps, tremulants, shutters, and pipes—but the chests will keep you going until the next issue.

(To be continued)