Pipe Organs
St. Mark's Cathdral
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ORGANS

A rank is a row of pipes. These trumpets were installed in the nineties. Each rank has a separate voice. The piano-forte is either loud or soft. On the organ, the volume is changed by choosing different ranks, or by putting the pipes in a box. The sound of each pipe is always the same. The Greek word from 3rd century BC, orgn = tool. The very first keyboards by activating keys through pipes came from hydraulics. These words come from 13th century French or English. The word "organ" still simply means "instrument."

Bach walked 100 miles to hear Buxtehude play. Bach never left Germany.

The Bellows and the Reservoir. Traditionally an altar boy would pump up a giant box with bricks on it to build up enough air for the player to be able to play the first hymn. Often the blowers and reservoirs are in the basement. With pipes, if the air is cold they go flat, and if they are hot they go sharp. Most organs have a plaque that tells you where the nobs go to, but once you kknow you don't need signs. This organ has none.

An organist in Seattle died and the daughter gave Nathan all the music, so his collection of works doubled. It helps to have an interpretive style set in front of you before you start playing.

The Wind Chests are the backbone or the action of the organ. When a key is depressed, The wind chest is a box of wood behind the pin block. From the reservoir the wind is distributed into all the wind chests. Selecting a stop send the air down certain channels. The air goes across the slider into the pipes, and the channel. The slider opens a whole row of pipes. A tracker helps you feel the keys release. The stops control the slider in the wind chest. The pipe sits on top of a hole, but underneath the windchest hole is off-set. The channel goes laterally so all the pipes speak together. Other organs use a magnet and there is a possibility that they will get out of alignment and not all play simultaneously. An electric action allow the keyboard to be anywhere in the church as long as you can get wiring to it. When the key is depressed, it trips a magnet. These are cheaper to build, but when they are out of regulation, they don't cut off as cleanly. There are screws in the floor so that sections of the floor can be lifted out in order to access the tracker. Look at the tracker going into the wind chest and then at the back of the organ.

Pipes
Wooden box flat
Regular metal diapason pipe
Some have collars and notches that you tap up and down.
Your own body temperature can effect the pipe, so tuners use long rods to keep their bodies far from the pipe. One person holds down the key while the other person adjusts the tuning.
Solictional pipe is a string pipe – much thinner – and has a much different tone. The wood piece is called

the beard to focus the sound. There are ears on each side of the mouth. In
In this area they use fir, in the east they use poplar, and in the Midwest they use sugar pine.
The gamba also has a string sound.
The shape, the position of the lips and the languid all determine the quality of the sound.
The trumpets are tuned with a scroll at the top like a sardine can, or the tongue, which is like a slide whistle. The bottom acts like a kazoo. The trumpet pipes are quite strong.

Sometimes the page-turners have to work the stops as well.

There are so many pipes to consider, that you have to figure out what to do with them all. That's where the registration comes in. Consider how they all chatter together, the size of the church, and the location of everything. Then there is the playing technique as another factor. The Flemish organ has a lot of European roots. There are organs built specifically for Italian, or German, etc.

REGISTRATION
On this organ the pedals are on the bottom level, the grate is the second level, and the swell is on the top. The pedal opens the shutters on the swell box. When it is closed it is quieter and louder when the swell box is open. You can hear the doors moving. Registration is the combination of stops selecte. You have to rely on the stops that are available on any given organ. This particular organ has seventy-nine ranks. The buxt select is deliberately out of tune to the one next to it. If they are too close together, they pull themselves in, so thee must be something between them.

PITCH, TUNING & VOICING
There is a toe hole in the bottom of the pipe that can widen. Or a pipe will sit on the end for so long that the opening gets smaller. The tiniest adjustments make a big difference. If the languids sag or the toes close, sometimes it is hard to open them up again. The goal is to make all the pipes sound the same.

A Nigun is a Jewish humming song – a tune with no words.

There are three hundred banks on this organ. Under the keys are buttons that turn on pre-selected stops. If the hands are busy, there are foot buttons to do the same thing.