

*The final form of the tree in its journey through the factory: A beautifully decorated organ case.*



the great pedal pipes which are often 32 feet in length.

A stop on the console represents at least 65 pipes and sometimes 68 or 73 pipes. On the pedal, a stop represents 30 or 32 pipes.

Some idea of the size of the pedal pipes may be obtained from the following:

The Open Diapason are on the average, 16 inches x 19 inches x 16 feet long. Three inch deal is used to construct the huge 32 feet pipes which often weigh over 1,500 pounds and are 32 inches x 38 inches x 32 feet. These latter are known as Double Open Diapason and belong to the Pedal Organ.

Wooden pipes seem to produce a better and mellower tone than the metal ones for certain species of pipes and are extensively used throughout the entire organ.

4. *Swell-Boxes.*—All the organs, excepting the "Great" are enclosed in sound-proof boxes made of boards, between which is placed seaweed to deaden

the sound and an air space is also left between the boards which constitute the envelope. The boxes are fitted with shutters which open and shut at the organist's will, he simply having to press a balanced swell pedal. The opening and closing of the shutters gives a swelling or diminishing effect to the sound which very greatly adds to the tonal effect. The swell boxes are of course hidden out of sight entirely or as much as possible, by the case or by a few pipes which ornament the exterior as shown in Figure 3.

5. *Wind Supply.*—As has been stated before, an organ is useless unless it has a supply of wind and the supply must be adequate and regular. Wind is produced by a blower which is similar to a centrifugal pump and is encased in a wooden or metal box. The wind passes from the blower to wind reservoirs through trunks and then to the chests and later to the pipes when the action of the stops and keys causes wind to be admitted to them. Concussion bellows are usually located on the path of the wind which serve as re-