

Christian Tussing's Patent of 1914

Ron Bopp

Early American mechanical organ playing notes were identified and controlled by a rotating pinned cylinder. The earliest (large production) large band organ manufacturer was, of course, the North Tonawanda Barrel Organ Factory (later to become The deKleist Musical Instrument Manufacturing Company). Following the lead of European changes in the design of mechanical organs, the American manufacturers (Eugene deKleist, The Rudolph Wurlitzer Company and the North Tonawanda Musical Instrument Works firm) changed the format of recognizing and playing individual notes from the pinned barrel or cylinder to perforated paper rolls (in Europe the change was made to the folding cardboard book). This change was necessitated because of simplicity, economics and the ability to present a variety of music.

By 1912 American manufacturers produced primarily the perforated roll organ, leaving the existing cylinder organ to continue with their limited repertoire or later, to be converted by the factory to play the modern perforated paper roll. Organs apparently could be ordered as late as 1916 or 1917 in the pinned cylinder format but basically the years of 1905 through 1912 were the transition period. Patents by Eugene deKleist suggest that roll operation of organs was conceived and considered much earlier than 1905.

We knew the old-fashioned pinned cylinder organ, designed for Merry-Go-Rounds, could never be adapted to the purpose, because of the harshness of the music; the lack of means of regulating the tempo; the trouble and time necessary to change the music; the impossibility of putting a complete waltz or two-step on a cylinder (the music can not be any longer than the circumference of the cylinder); and the expense of new music.

That being said a review of the patent, #1,096,329, filed (9/26/12) by and granted (5/12/14) to Christian Tussing of Tonawanda, New York then becomes of interest because of its design. The Tussing name is familiar to American band organ enthusiasts. Christian Tussing was a brother of Henry Tussing (foreman of the Music Department at the North Tonawanda Musical Instrument works). Henry Tussing was the father of John William Tussing who became Wurlitzer's most prolific arranger of musical rolls during the 1930s. Many of the original Wurlitzer stencils in the inventory of the Herschell Carrousel Factory Museum in North Tonawanda, New York are signed by J. William Tussing. Ralph Tussing, a nephew, formed the T.R.T. Manufacturing Company in the late 1940s after working for the Rudolph Wurlitzer Company from 1918 until he

changed companies and worked in the Artizan Factories, Inc. in 1929.

Little is known about the life of Christian Tussing except that his son, Christian Tussing, Jr. was at one time a public school principal in Tonawanda, New York. Christian Tussing did, however, apply for and receive a patent for an "Automatic Organ" (Figures 1 & 2). This patent was filed on September 16, 1912, a time when organ companies had already converted to the more versatile perforated roll.

Christian Tussing's "new and useful improvements in Automatic Organs" were outlined in the following patent specification:

The present invention relates to automatic musical instruments of the type employing pipes, and the object is to provide a simple practical structure of this character that may be made to produce varied combinations of notes or different tunes at the will of the operator. It is thus peculiarly adapted for use on automobiles, power launches, and the like as a signal or alarm, but of course it is not necessarily restricted to such use.

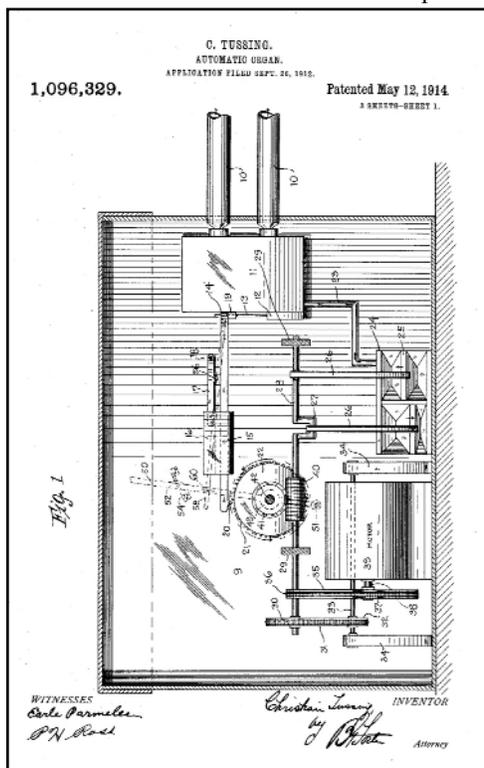
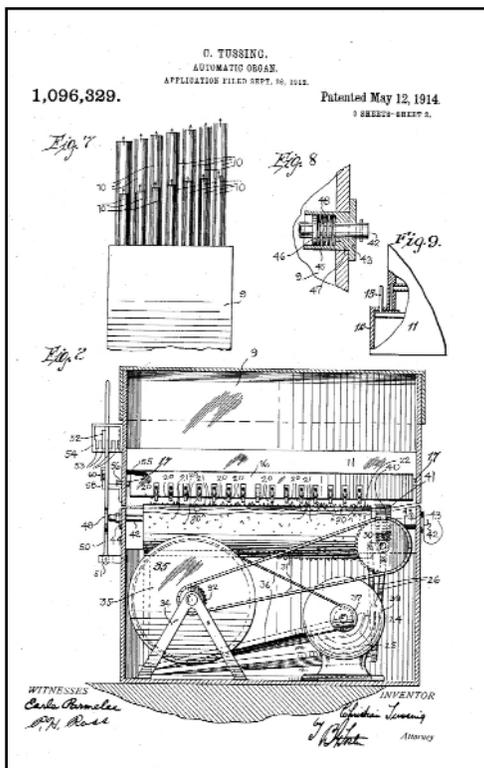


Figure 1 (left) and 2 (right). Figure 1 details the first page of Christian Tussing's patent and Figure 2 is the second page.

In a 1906 catalog, Wurlitzer Automatic Musical Instruments, it was stated:

Christian Tussing summarized his patent by claiming:

The combination with a plurality of air-operated sound-producing members, of a wind chest connected thereto, valve mechanism for controlling the passage of air to the members, a plurality of pivoted levers for operating the valves, a swinging support for the levers, a rotatable and longitudinally shiftable record cylinder for operating the levers, a lever movable in two directions and by its movement in one direction, shifting the cylinder longitudinally, and a swinging arm engaged with the lever support for swinging the latter and being engaged and operated by the lever upon the movement of the latter in another direction.

In light of the improvements made with the perforated roll, the intent of this patent seems outdated. Of interest, however, is the phrase “thus peculiarly adapted for use on automobiles, power launches, and the like as a signal or alarm,” which indicates that perhaps this patent was not as much for the mechanical music industry as it might have been for a type of automatic signal device or attention getting mechanism. I have found other patents where mechanical music seems to be the important part of a moving vehicle. The far-reaching music of the steam calliope was limited by the necessity for a heavy and awkward-to-move boiler and the portable air calliope had not yet reached its years of popularity. If the need for this type of alarm or attention-getting device existed then there may

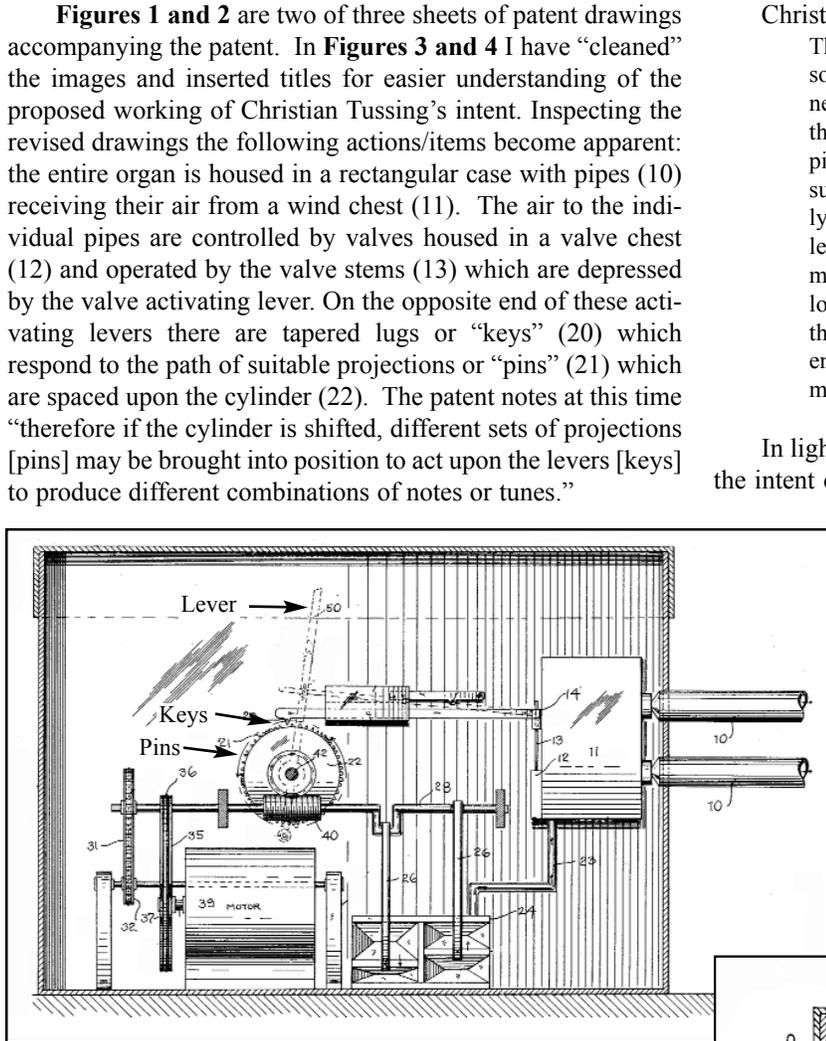
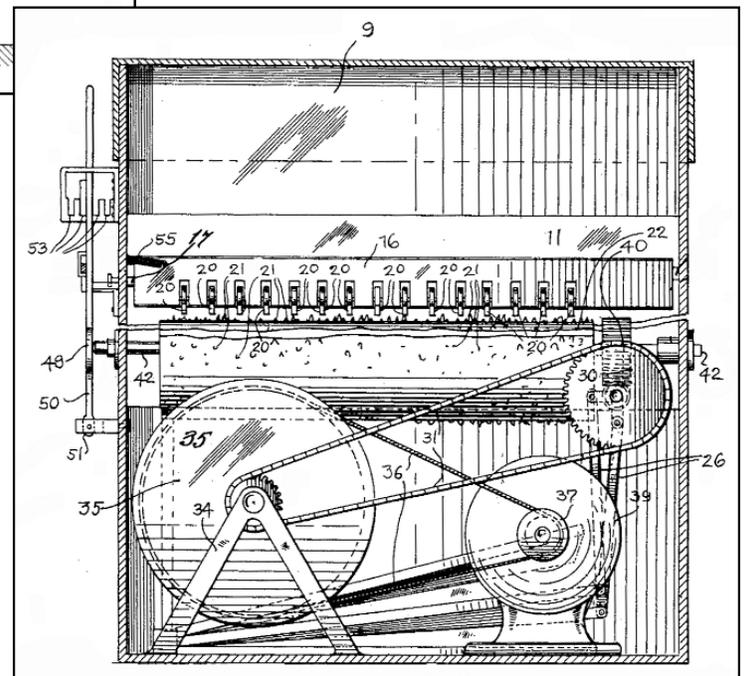


Figure 3 (above) and 4 (right). Figure 3 shows details of the front page of Tussing's patent and Figure 4 is a detailed 2nd page.

Air is supplied to the wind chest (11) through a pipe (23) connected with a pair of bellows (24), which are attached by pitmen or “connecting rods” (27). The pitmen are connected to a crankshaft (28) which is attached to a worm gear (40) which turns the cylinder. The crankshaft is powered by belts (31 & 35) attached to a motor. Movement of the cylinder to play different tunes is accomplished by moving the tune changing lever (50) into a choice of tune slots (53) pushing the cylinder along the cylinder shaft (42).

After the description of the acting parts the patent notes:

With this mechanism, whenever an alarm is to be sounded or a tune played, the operator has merely to close the electric switch of the circuit in which the motor is placed, whereupon said motor will be thrown into operation, and upon the rotation of the power shaft, the bellows will be actuated, and the record cylinder rotated. As the projections on the latter engage the levers [keys], these levers will be depressed in predetermined order, and combinations of musical notes will be emitted.



well have been a use for such a device suggested by Mr. Tussing. It is hard to imagine, however, that a new design for a cylinder-operated organ would have been necessary in the time when that method of playing was being phased out.

Ron Bopp lives in Oklahoma with his wife, Mary Jo, on Grand Lake O' The Cherokees. He is currently Editor/Publisher of the *Carousel Organ*.