The "Auto-Organ"

Ron Bopp

Many of us have dreamed of having an organ unit that can be displayed on a motor vehicle. Many of us have attempted to do just that with placement of old or new organs, whether band organ or small street organ, on a motorized vehicle (**Figure 1**). All of these truck and/or golf cart organs utilized a generator for a power source for the organ.

Figure 1. A newly-designed organ built by the Stinson Organ company mounted in a 1920s Model A Ford pickup truck.

In 1909, however, James R. England of Dallas, Texas, applied for a patent for just such a combination (**Figure 2**), but with one difference—his organ would run off the power source of the vehicle. His patent, #977,084, was granted on November 29, 1910. The title of the patent was *Auto-Organ*. His primary objective of his patent was to:

> Provide organs which may be operated by gearing the same to automobiles or other vehicles or to windmills or to any other suitable driving mechanism and to provide organs which will be inexpensive and which will furnish pleasure and amusement.

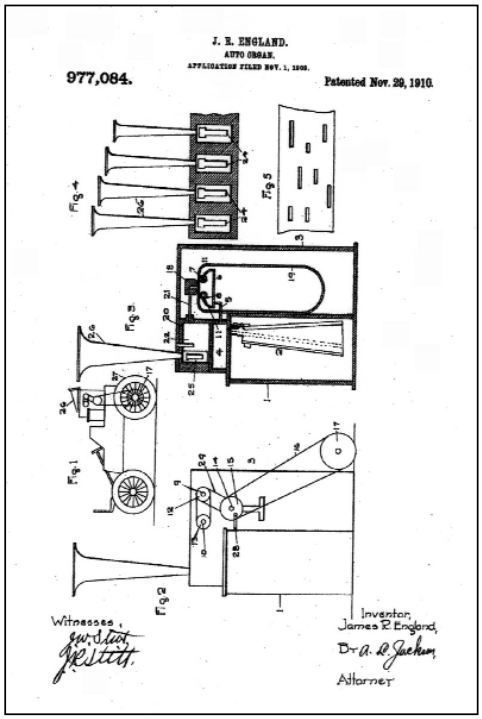

Figure 2. James England's full patent drawing as it appears in the United States Patent Office patent #977,084.

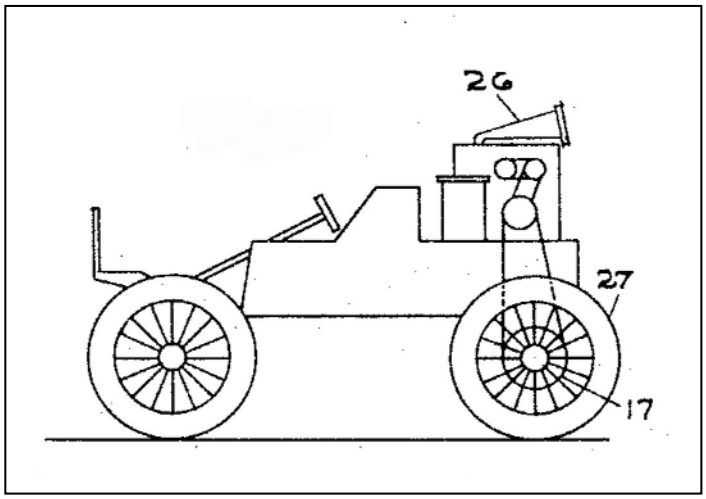

Figure 3. The Auto-Organ, complete with driving mechanism coming from the rear axle of the vehicle.

Figure 3 presents an overall view of Mr. England's proposal where **Figures 4 to 6** show more specifics of the organ. The organ proposed is a trumpet organ with Figure 6 detailing the reeds and trumpets. One of several interesting items is the gearing proposed in Figure 3 and 4. No. 17 indicates the driving mechanism—in Figure 3 it is the automobile/truck wheel and in Figure 4 it could be any other "suitable driving mechanism."

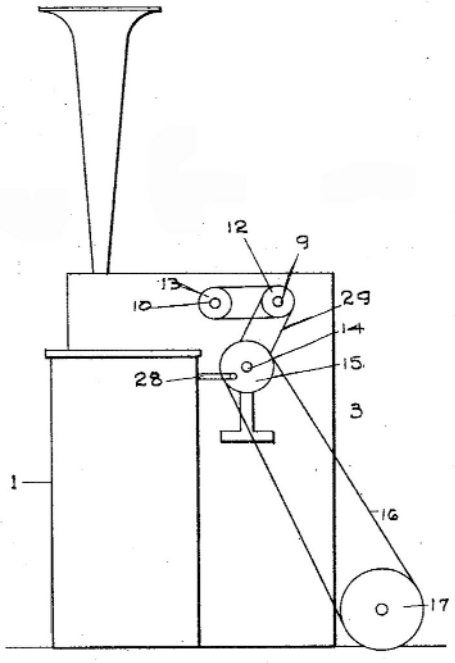

Figure 4. The organ is now depicted as out of the vehicle where wheel No. 17 can be powered by another source.

While **Figures 4 - 5** indicate the trumpets in the "up" position, his patent states:

> The horns may be made any suitable size and it is preferable when the horns are attached to a moving body, as a vehicle, to bend the horns backward as shown in Figure 3. [. . . and he goes on to say:] The horns are to be graduated in size, corresponding to the graduated reeds.

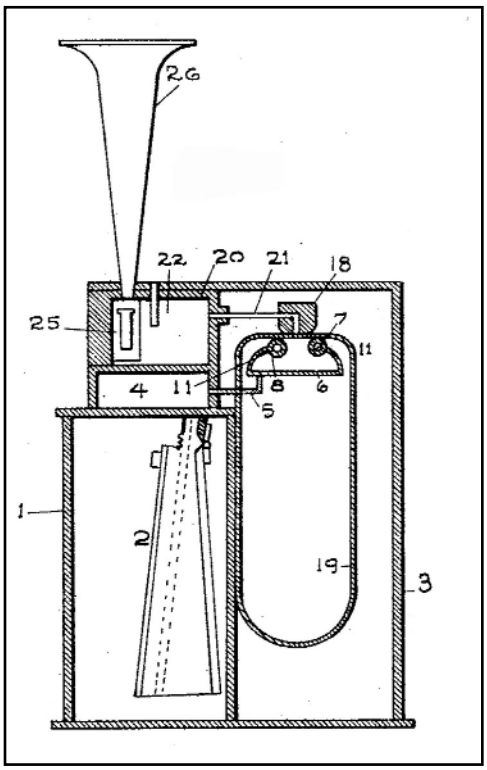

Figure 5. A cross section of the organ, showing the endless roll (No. 19) crossing a tracker mechanism (No. 18)

Careful study of the patent (especially **Figure 5**) reveals just how he planned to make the organ work. This side view reveals the bellows, No. 1 ("No." will refer to the small identifying numbers on the patent drawing itself), on the left side of the case and what appears to be an endless roll (No. 19) in its separate bin on the right. A tracker mechanism (No. 18) holds down the roll and tubing (No. 21) goes to each individual reed chest (No. 22) where the particular reed (No. 25) will play its corresponding trumpet (No. 26 in **Figure 6**).

No. 4 on this diagram in **Figure 5** is the reservoir (what he calls an air compressor casing) and supplies the pressurized air to the chamber (No. 6) where the endless roll is moving. Therefore, there are no valves in this system he proposes—just a direct link through the perforated paper strip (**Figure 7**) into the trumpet reed.

The mechanism to actually play the organ from an external source, whether it is an automobile or steam engine or what-have-you, is depicted in **Figure 4**. The source of rotary power (No. 17) turns a belt which in turn, enables a pulley (No. 15) which as a pitman (No. 28) which operates the bellows. The endless music roll is moved by rollers seen in Figure 5 (No.'s 7 & 8) which are attached to shafts (No.'s 9 & 10) which are also activated by pulley No. 15 via a belt, No. 19.

The objective . . . to provide organs which will be inexpensive and which will furnish pleasure and amusement.

Mr. England therefore claimed, in his patent #977,084, by way of his invention that:

> An auto-organ comprising a bellows and a casing therefor, a music roll casing connected to said bellows casing, a compressed air casing connected with and having communication with said bellows casing, an air vent casing mounted in said music roll casing, a pipe connecting said compressed air casing and said air vent casing, music roll rollers mounted on each side of the discharge opening of said air vent casing, a music roll holder bearing yieldingly on a music roll passing over said rollers and provided with ducts therethrough, reeds and cells therefor, flexible pipes connecting said reed cells and said music roll holder and forming a communication with said reeds and the music roll passing under said holder, and horns operatively connected to said reed cells.

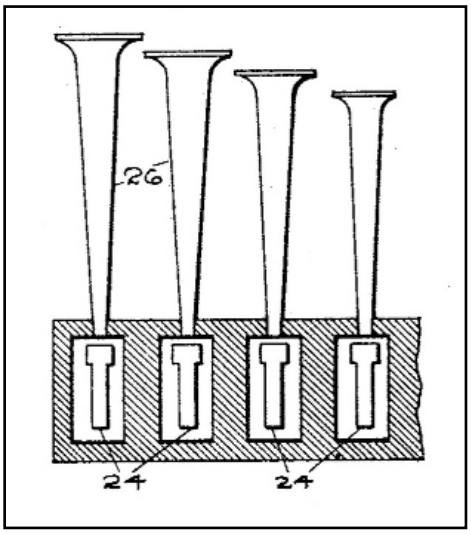

Figure 6. The reeds for the organ's trumpets are depicted here.

Does it work? Were any made? What did it sound like?

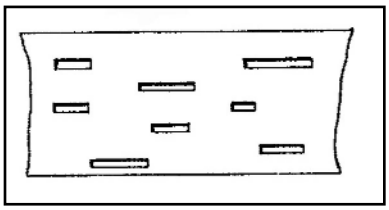

Figure 7. The perforated paper strip to play the Auto-Organ.

I am not aware of any such existing machine although the organs of the turn of the century did operate off of carousels and an external power source. Having no valves would make this instrument very crude in it musical ability (somewhat some of the simpler reed organettes). It would almost be an interesting challenge for one to make such an instrument, especially if it could be hooked up to a historical vehicle such as is pictured in **Figure 2**.

Additionally, one would have to operate the vehicle at a constant speed or the organ would fluctuate in pitch and volume. And, as we all know, parades fluctuate in speed. The concept, however, is interesting to look at and, at least by the author, appreciated as an endeavor to combine mechanical music and mechanical travel. What a parade unit it would make!