Who Came Up with the Word O-R-G-A-N?

Meaning of the word *organ*

The English word *organ* comes from the Latin *organum which comes* from the Greek *οργανον* (pronounced or-gahn-un). Any object which could be considered a tool or machine fell into the category of being *οργανον*.

Take the English word *tools*. On the left you see a picture of *tools*, yet each tool is called by a more specific name and each must be operated by the user in a different manner than the other. But, they are still tools!

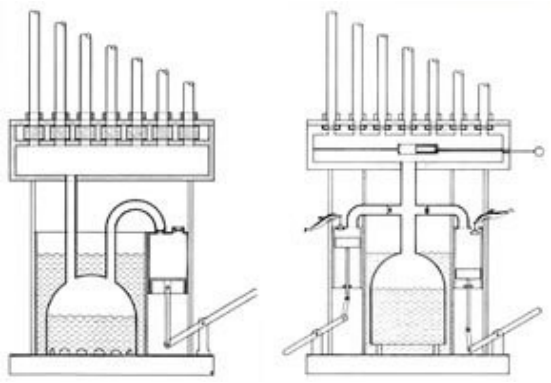
The first picture below shows a machine, a concrete-laying machine. The picture below it shows a different machine, a harvesting machine. Both are machines — but serve different purposes.

The organ when it was invented, and still today, can be defined as a machine: *an apparatus using or applying mechanical power and having several parts, each with a definite function and together performing a particular task.*

But why was this *οργανον* invented? What was its purpose? Glad you asked! There was a physicist/mathematician/inventor by the name of Ktesibios (Ctesibius) who lived around 250 BC during the Hellenistic period (before Christ) in Alexandria Egypt. He believed air could be compressed in an air-tight cylinder, but first had to figure out how to get the air into the cylinder. The tool he invented to make this happen was the pump. That's right! Your bicycle pump was invented 200-300 years before Christ! Once he was able to force/compress air into an air-tight cylinder, he could release the air suddenly, with powerful force.

After proving air could be molded and forced into an air-tight cylinder, Ktesibios wanted to build a machine that proved compressed air could be released over an extended period of time at a controlled rate of delivery. The end of the story was a machine (*οργανον*) that could be filled with air in an air-tight box, releasing the air in a systematic,

prolonged manner as opposed to a sudden, powerful burst of compressed air. As long as air continued to be pumped into the air-tight box, levers or keys, when depressed, linked to a valve under the pipe, allowed air to be released through the pipe, causing sound. This *οργανον* was a brilliant and amusing invention and became a popular novelty among the wealthy. It came to be known as ύδραυλις (*hydraulis*, or *water*) *οργανον.* Many of these ύδραυλις *οργανον* could be found throughout the Roman Empire, even during the time of Jesus. In fact, it is very possible that Jesus heard one of these *οργανον* whenever he was in or around Jerusalem.



Ancient mosaic depicting a ύδραυλις *οργανον*

How did the ύδραυλις οργανον work?

Pipes sat atop a hollow, air-tight box connected to an open ended, upside down canister submerged in water, into which air could be pumped via a hand-operated piston. During up-stroke, the piston drew air through a one-way valve into the pump. During down-stroke, the piston displaced air from the pump into the upside down canister submerged in water. As air entered the canister, water was forced out of the canister. Water does what water wants to do, and enters the canister, forcing the air into the air-tight box waiting to be released through a pipe once the pipe valve is opened. It was the constant pressure/weight of the water pushing the air from the canister up into the air-tight box that caused the box to be continuously filled with air, awaiting for release through a pipe.

Eventually, bellows came to be used to force air into the air-tight reservoir, the top of which was weighted with stones, the weight of which forced air into the wind chest on which the pipes sat.

Exactly when the word *οργανον* began to take on the more specific connotation with the specific musical instrument we know today as the organ, is unknown, probably during the 700s. We can only say with surety that by the 11th and 12th centuries, the transition had occurred.

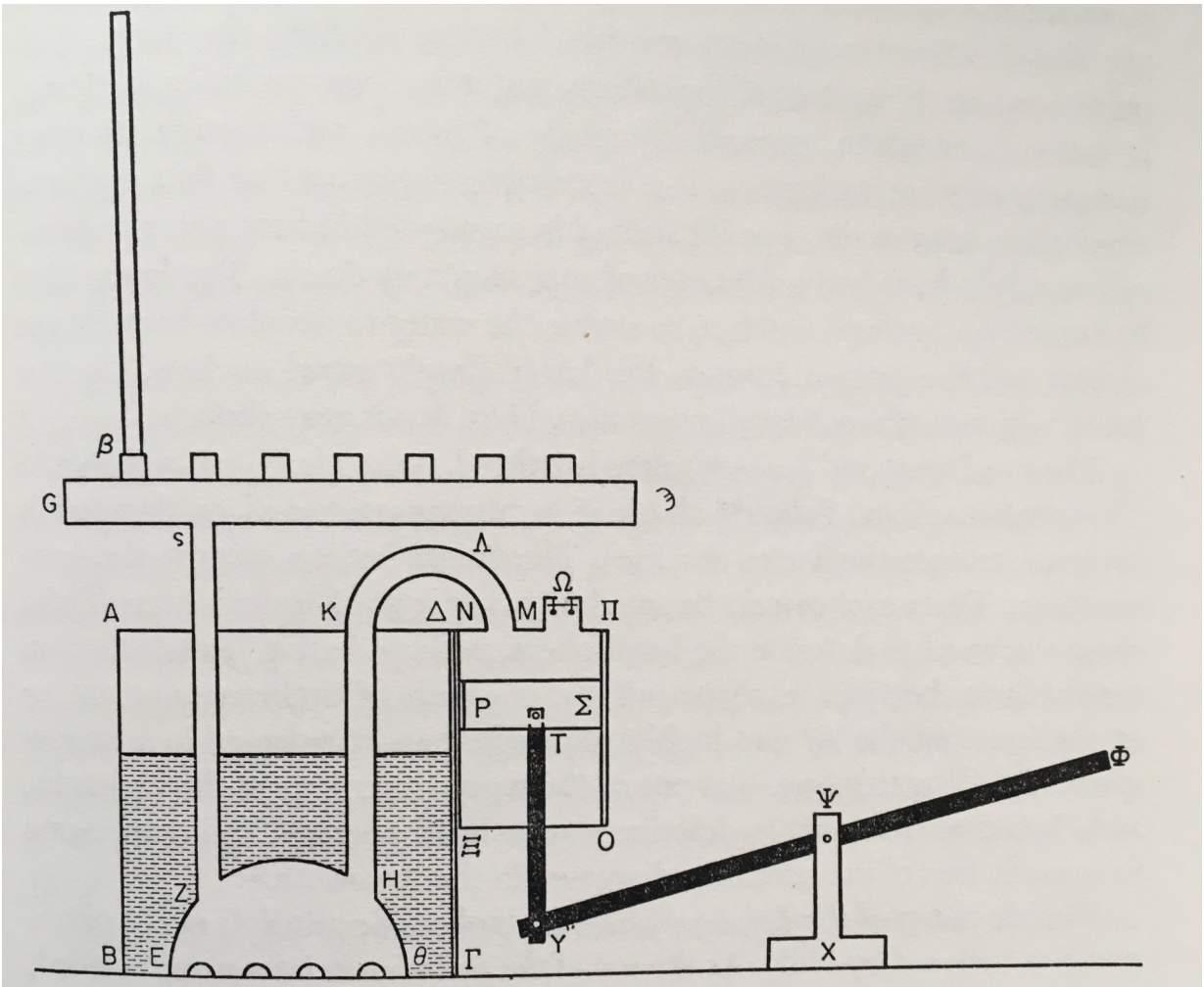


Fig. 1a. Hero's Organ. The blowing mechanism

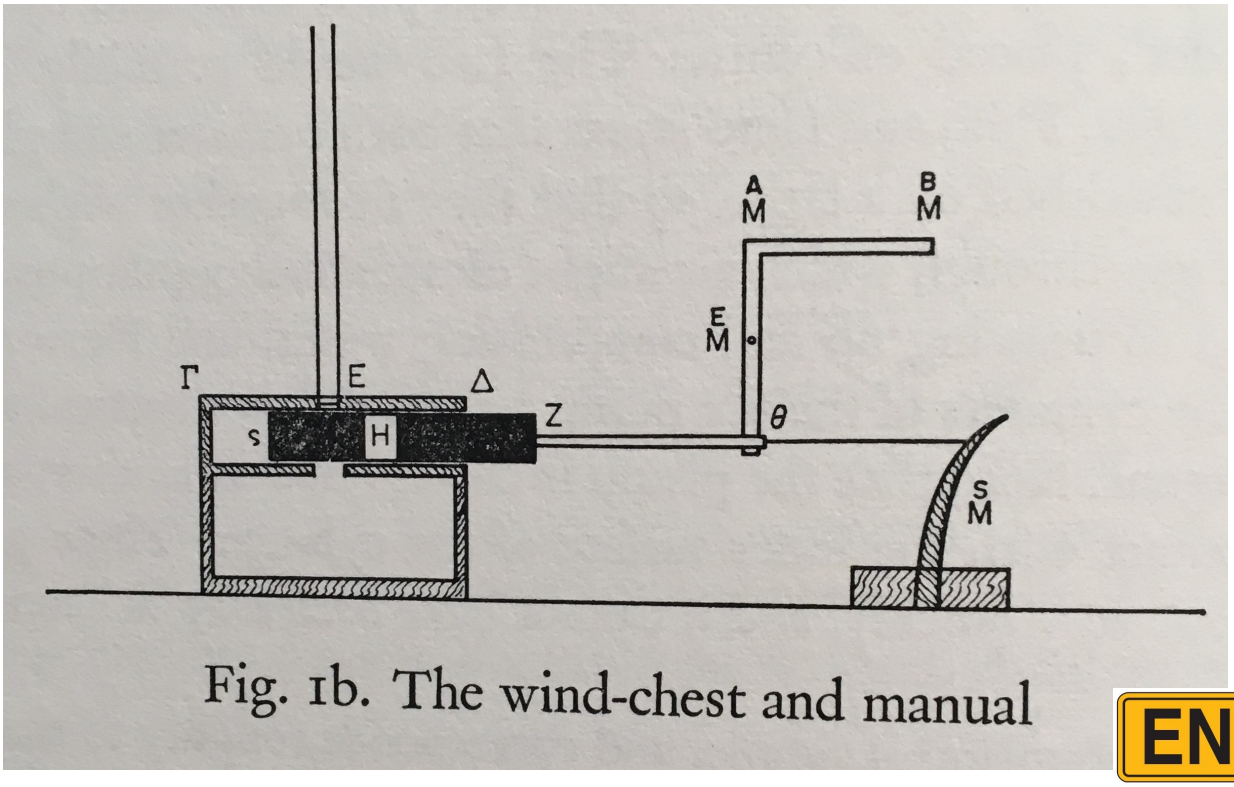


Fig. 1b. The wind-chest and manual

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