

Weld County Court House Pneumatic Clock

The pneumatic timekeeping system in the Weld County Court House is an outstanding example of an air-driven clock system, one of only a few that up until about eight years ago was still in use. The master clock which resembles a grandfather clock operates eight other clocks in the building.

A pneumatic timekeeping system uses air pressure as the primary source to move its internal components. A bellows-style pump located in the master clock expands, then contracts, every sixty seconds forcing air through metal tubes built into the interior of the Court House structure that connect the master clock to secondary or slave clocks in the building. Bladders located in each of the secondary clocks then fill with air and move the hands of the clocks forward.

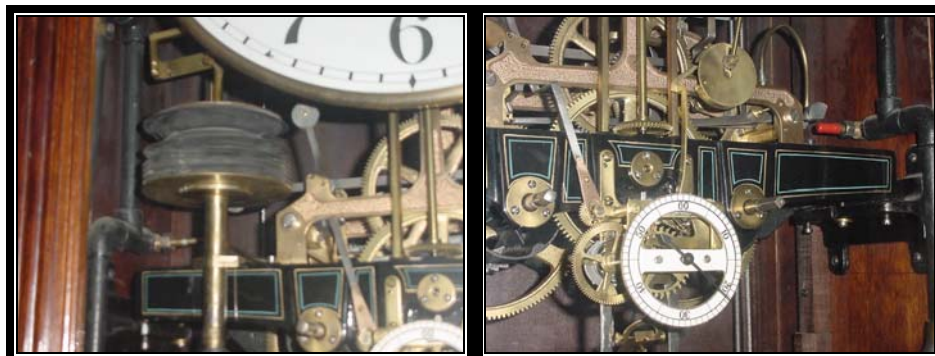
Currently the clock is in need of repair so is not operational.



PNEUMATIC MASTER CLOCK

The master or grandfather clock of the Weld County Courthouse is located on the second floor. It operates eight other clocks in the building through a pneumatic system of tubes, gears, bladders, and pumps. Pneumatic clocks use air pressure as a source of energy to drive its internal components. The large pendulum swings back and forth which moves the gears located above the pendulum. The accordion-style pump located to the left of the clock face expands and contracts forcing air through tubes built in to the internal walls of the courthouse. The hands on the master clock move forward. Bladders within the secondary or *slave* clocks expand and contract and move those clock hands forward. Pictures of the secondary clocks are provided on subsequent pages.

PNEUMATIC CLOCK SYSTEM INTERNAL COMPONENTS





SECONDARY or SLAVE CLOCK (Division 1, Fourth Floor and Division 3)



**SECONDARY or SLAVE CLOCK
(Division 5, Second Floor and Second Floor Vestibule)**



SECONDARY or SLAVE CLOCK (Administration Office, Third Floor)