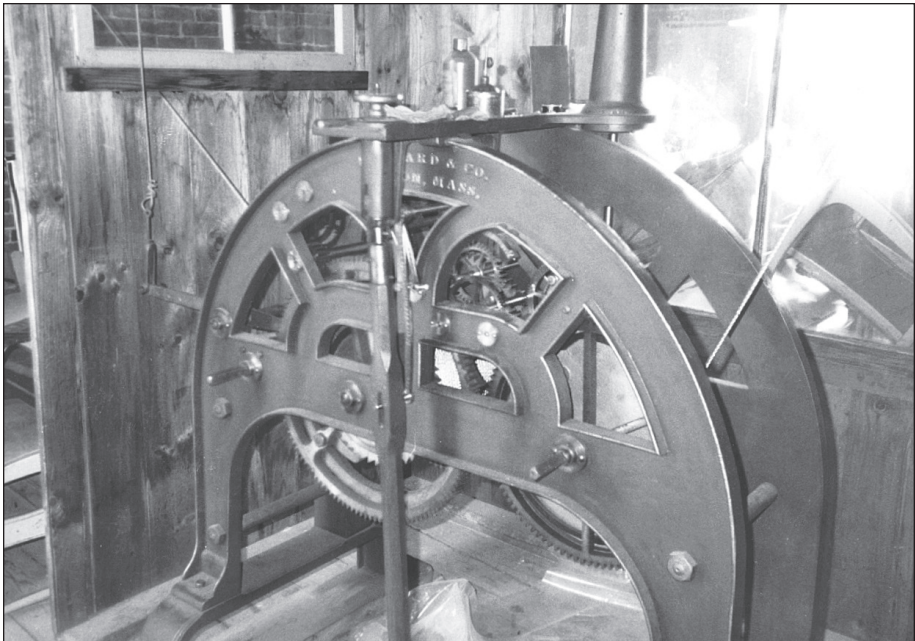


A Matter of Time

I AM ALWAYS IN A rush, it seems, when I climb the stairs to the tower clock in the interval between morning meeting and the beginning of the school day. The newest among a succession of “winders of the tower clock” (a duty I share with Leslie Guenther, Middle School Director whose office is immediately below the clock), I climb in the figurative footsteps of Gerald Twitchell, Jay Woolsey, Bill Pierson and others. I wonder if I will come to understand the workings of the clock as well as they did. Emerging from the upper stairwell into the spare light of an early winter day, I enter the calm of the tower room. The clock works sound softly, rhythmically from the half-shadow of the cubicle at the front of the tower. It is January, and the sun low over the southerly horizon barely penetrates the two narrow windows on the east and west faces of the tower.





Edie Pierson.

I seat the winding tool with its cast body and wooden handle firmly onto the square shaft which protrudes from the drum for the winding cable on the time side of the clock mechanism. Two-handed, my breath puffing white in the chill, I begin to crank the drum around — twelve full turns for the days past — to bring the counterweights back to the top of the tower. In direct drive, the winding drum recovers about two feet of cable for each revolution, lifting a pallet of cast plates suspended in a channel on the southeast corner of the tower.

Indirect light from the nearby window catches several chunks of metal arranged on the top of the dull metal pendulum bob. With each revolution of the handle, my eyes return to the metal bits as they begin to glow in the gathering light. I used to think of them as finely calibrated weights to adjust the total weight of the pendulum, but I now know better.

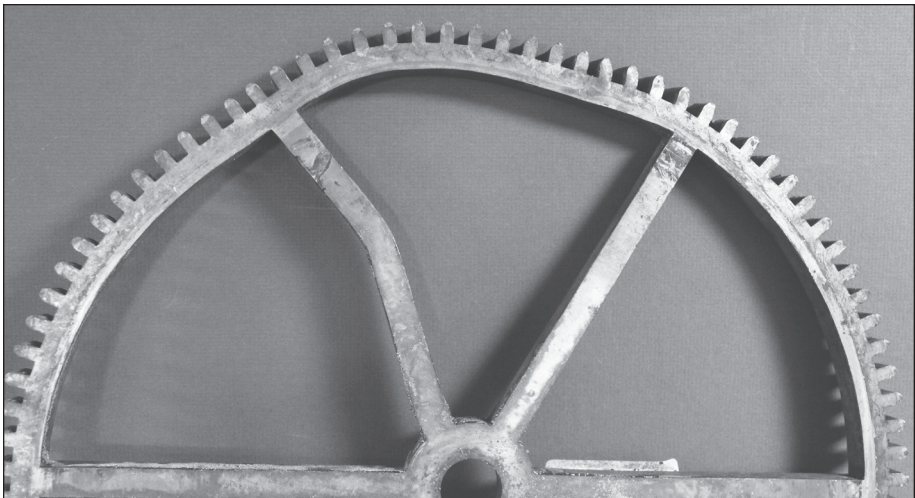
Bill Pierson placed them there two years ago, the spent and damaged bushings which he had removed from the clock carriage, and set there on top of the pendulum while he continued his work, perhaps for lack of a better place and thinking possibly that he might save these oddly misshapen pieces of brass as mementos of his repair project for the tower clock. He never took them away, and they remain today in a sort of static display, seven light circles of brass arranged against a darker column of steel.

The seven brass bushings look like small donuts a little less than two inches in diameter, their outer edges symmetrical but their inner holes polished and worn into mildly elliptical openings. One — I learned from Lew Williams, our Director of Maintenance — caused the accident which stilled the clock in 1991 until Bill Pierson set it in motion again in September of 1997. Are these the original bushings created for the clock, the first lubricating cushions for the shafts of the mechanism? What was their life expectancy? How rapidly did they wear from the moment in December of 1908 when the weights first hauled against the gears to set the hands in motion? Was the deformation of their centers, the growing play among the shafts of the clock detectable during the course of nearly a century?

I throw the handle through another turn, watching the cable shouldering onto the drum adjacent to the previous coil. From the dark mouth of the channel in the southeast corner of the building, the counterweights slowly emerge, a rack of 1000 pounds of iron plates riding a carriage up through the walls of Mr. Leyden's and Ms.

Guenther's offices. If one imagines the clock mechanism as a gravity train by which the weights pull, through an intervening sequence of gears, the hands of the clock around the tower face; then I have entered my force into the middle of train, and in winding the weights to the top of the channel impart the energy for the mechanism to pull upon the hands for another week, measuring and displaying upon the tower face the passing of Hebron time. To my right is the counterweight carriage, connected by cable and ceiling mounted pulleys to the drum which I am now cranking to the end of today's dozen turns. To my left, communicating through a powerful sequence of gears to the counterweight is the heart of the clock—the escapement gear which, alternately released and arrested by the clock's anchor and pendulum, measures second by second and minute by minute the passage of the hands around the face of the clock. My winding complete, I slowly release the tension on the handle, allowing an arresting pawl to catch upon a cogwheel adjacent to the drum, checking to see that the pawl rests against an intact cog and not one of several which have been ripped from the gearwheel.

The cogwheel was ripped apart at 10:20 on an autumn morning in 1991, at an instant in time when a single worn bushing, its elliptical channel now allowing sufficient play of the escapement gear's shaft toward the front of the clock carriage, caused at one tick of the mechanism the clock's anchor to miss the next tooth, caused the anchor not to arrest the forward motion of the escapement gear; and that motion, unarrested and gaining momentum, allowed the entire gear train to submit to the inexorable pull of the counterweight to set the entire mechanism into accelerating motion. Another bushing failed; gear teeth no longer met shoulder-face-to-shoulder-face but jammed point to point and then slipped past each other, bending and tearing metal points as they moved. The ratchet pawl which locked against adjacent teeth to hold the lifted counterweight against free fall sheered off successive teeth until the 99-tooth main gear, its spokes no longer able to sustain the strain, buckled inward from a perfect circle to a melon-like form and wholly released the tension on the



system. Cable flashed from the drum; the counterweight fell free to the second floor of the school building, exploding the woodwork channel in then Headmaster David Buran's second floor office. Donna Wallace who was working next door remembered, "It scared the daylights out of me. It sounded like something had exploded next door."

Immediate repairs ensued. The woodwork in Mr. Buran's office was restored, but the clockworks were not so easily fixed. Mr. Woolsey suspended his daily trips to the tower. Its energy spent in the devastating crash, the clockworks that had sent the soft ticking sound for decades through the panels of the walls of the second and third floors was stilled.

Consultants visited; experts examined, figured and diagnosed — "irreparable," "costly," "parts unavailable," "relic to be modernized and electrified." The mechanism had had too little care, they reported. The environment of the tower might be too harsh for such an antique. The craftsmen capable of repairing such a mechanism had long since passed on. It could be restored, one said, for forty thousand dollars — but with no guarantee that it would actually keep time reliably again. And in 1992, the crucial needs of the Academy simply dictated that repairs would not be authorized. More than the clock needed to be fixed.

TIME STEPS FORWARD TO 1997. Bill Pierson — our neighbor in Hebron, master machinist, Masonic lodge member, deacon of the Hebron church, staunch football and hockey supporter, attendant for the chains at home football games, ever-present to move the goals for the period changeovers at hockey games, rink man, pizza man and true friend to Hebron students — set about to fix the clock. Edie Pierson remembers that the idea came in the spring of the year, as an inspiration to honor Scott Smith '87, gifted hockey goalkeeper who had died in a tragic surfing accident before his junior year. Bill remembered Scott fondly from his first years in Hebron, and it seemed to him a good thing that the clock might work again when the Class of 1987 returned to campus that fall for their tenth reunion. Headmaster Dick Davidson recalls that the idea emerged in the most casual of conversations on the porch of the Hebron Community Church after services. Bill had visited the clock, thought he could do something about it, asked simply for permission to have a go at it.

Quietly, Bill set about his task, working first through the late spring to dismantle the works from the carriage, freeing stubbornly jammed gears and removing worn and damaged parts as patterns for their replacements, calibrating and measuring shafts and sockets, the angles and pitches of the gears. Through summer months he worked after hours at Maine Machine Company to fabricate a new main gear from a solid blank of stainless steel, individually shaping 99 teeth within exact tolerances for the depth of the channel and the pitch of the shoulder. "Cussed stuff to work with," he reported, "but tough enough to hold."

In the early fall, he fitted seven fresh bearings into the carriage and re-assembled the works, installing a newly turned gear shaft and the large machined gear abutting the winding drum. The clock wouldn't run. Edie Pierson remembers his frustration: days of ranting and cussing as he worked and reworked the gearing, massaging a works idled for six years, a works become static in time. Bill persisted through the month of September, determined that the clock should run because it was something

to be done for a friend. The mechanism stilled since 1991 gradually awoke, and under Bill's patient and daily ministering resumed its rhythm and once again measured the life of the school.

Bill ascended the stairs at odd times through that year to wind the cables onto the drums, to add a drop of oil or brush accumulated grime from the cogs, or perhaps to file ever so slightly an offending burr from the shoulder of a gear cog so that the toothed wheels might walk more easily in their channels. He left an assortment of small brushes and files atop the carriage. He left the spent bushings arranged on the dark steel pendulum.

In the summer of 1998, Bill learned that he had cancer, and in the fall I came to spend good hours with Bill and Edie in the kitchen of their home on the edge of campus. My pretext was always a question about the clock, the adjustments to be made as it gained or lost a step to the passage of the days, but as Bill's illness progressed, it was also a good time to check in with a friend. Through the fall we talked of the clock, his work on the gears, his memories of Scott Smith and other students. I learned the points of lubrication in the carriage, the places to look for wear, how to test for play and how to make adjustments, the tricks for resetting the chime and calibrating the face. Bill talked occasionally of his chemo treatments and what might lie ahead, adjusting himself from time to time in his chair as he adjusted himself to his disease. Always there was a coffee cup in Bill's hands, and I found myself watching his hands as much as his face. Fingers became translucent in spite of the rough exterior. Nails yellowed, yet as Bill talked, always the fingers would be in motion upon the cup, fitting, adjusting as if upon a nut or a wrench, the fingers of a master machinist in touch with his craft. Bill spoke of adjustments to be made, a gear he would watch and perhaps file a bit. And we would make vague plans for a visit to the tower, a time when I might see directly the things that he saw in his mind's eye, a time when I might watch his hands upon the gears and come to understand in some way what he knew from his work. "We will make time for it," we'd say, but we both knew, most likely, that it was not to be.

Bill Pierson died in November, a person who touched the Hebron community in many wonderful ways. He will be missed, for he was a man who made time for us all.