Down By The Old Mill Stream

Gear Technology's bimonthly aberration — gear trivia, humor, weirdness and oddments for the edification and amusement of our readers. Contributions are welcome.

Back in the days when our great, great, great, etc., granddaddies were designing gears, one of the most common materials in use was wood. For fairly obvious reasons, we don't see too many wooden gears around anymore. But there are a few.

Your intrepid Addendum staff has found some—ones that are still in use, operating and not in a museum. Moreover, they're less than thirty years old.

In a small town in southern Maine, Dr. Clement A. Hiebert has built a water wheel to move the water up from a stream some 10 or 11 feet to his 14-acre mill pond. At the heart of the system is a 10.5' wheel driven by a lantern gear. The wheel is made of oak, and its replaceable teeth and the gear are made of rock maple. The drive is connected by a series of pulleys to drive the generator.

The whole system was designed by Dr. Hiebert and built, not by a gear engineer, but by Thos. Moser, a custom cabinet and furniture maker in Auburn, ME. The entire project took months. The wheel had to be constructed in sections, and each tooth was hand-cut individually.

Dr. & Mrs. Clement A. Hiebert and their mill wheel.

Why, we asked Dr. Hiebert, today, when everything not run by fossil fuels is run by computer chips, did he spend the time and effort to build a mill wheel? For the pure love of the thing, apparently. Dr. Hiebert doesn't need the electricity the mill could produce, and presently the mill doesn't do anything.

The retired surgeon justifies his "ancient landmark under construction" by saying that he "likes projects" which force activity and involve problem solving. He enjoys the act of pulling all the pieces of a project together. He also confesses to a fascination with moving water and explains that he spent a lot of time as a kid poking sticks in water just to see what would happen. Therefore, it seemed only logical, once he acquired property which had a stream running through it and once before had been occupied by a mill, to build another one.

To build gears for the sheer pleasure of the process: Now Addendum understands that kind of man.

Meanwhile, at the other end of the time warp . . .

Last December, when astronauts on the space shuttle Columbia had to abort their space walk because the door to the hatch was jammed, gears were at the heart of the problem. It seems that a screw fell from its hole and became embedded in the gears of the hatch, probably during liftoff, according to NASA spokesman Bruce Buckingham. The loose screws were discovered after the gearbox was removed from the hatch and taken apart.

We checked with Bruce again in January, while the Atlantis was on its way to meet the Russian space station Mir and pick up astronaut John Blaha, who had been on the station since last September. To make sure the same thing didn't happen again, before launch, technicians took apart the hatch on Atlantis, checked the gearboxes and the screws and applied a coat of Loc-Tite to the screws, just in case. The ounce of prevention worked. The hatch opened without a hitch, John Blaha wasn't stranded with his Russian friends and a multi-million dollar screw-up (sorry about that) was avoided. Sometimes, the down-to-earth methods are the best after all. ○

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