

Repairs return clock to Old Faithful self

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YELLOWSTONE NATIONAL PARK, Wyo.--Ticking away without fanfare, the clock did its work stationed on the stone fireplace in the Old Faithful Inn in Yellowstone National Park for 80 or 100 years, as near as anyone can tell.

Traveling the years, the clock's minute hand crept around the face more than 700,000 times.

It needed a little help along the way, repairs pieced together in the boondocks with versions of chewing gum and baling wire. Finally, as it wore down, there was a timely crisis.

"What was there was a real basket case," says Dave Berghold, a clock expert from Bozeman, Mont., who was called in to try to keep the Old Faithful clock ticking. "It had been patched and patched and patched."

Even so, to Berghold--who owns the Last Windup shop in Bozeman and heads a five-state chapter of the National Association of Watch and Clock Collectors--the Old Faithful clock looked like a treasure. A sweeping pendulum more than 13 feet long, hands about the size of yardsticks and stately Roman numerals testified to how the clock originated in the shop of a skilled Livingston, Mont., blacksmith about 1903 or 1904, according to one history buff.

Berghold says he told the people in charge--officials in the park and for the concessionaire managing Old Faithful Inn--that they "should really have this thing done right."

So he got the job of restoring the Old Faithful clock. It was not something that could be rushed.

Starting in May, Berghold enlisted two fellow Montana collectors: Dick Dysart, a retired entomologist in Livingston, to do the historical research, and Mike Kovacich, a machinist in Anaconda, to reinvent the mechanics.

How bad was it? The Old Faithful clock had not been striking the hours, and the pendulum was no longer connected to the gears.

"We had to rebuild it from scratch," Berghold says.

Staying historically correct

Kovacich, a former machinist for Anaconda Copper, has a garage stuffed with lathes and other machines he uses to make clock kits he sells to people around the world. With the Old Faithful clock, "the first criteria was to stay historically correct" as much as possible, he says.

Kovacich also did the math, working upward from the old pendulum: with a pendulum 156.5 inches long, each swing of it will last 2 seconds, which means a ticking-gear ratio 30-1, which means "a 72-tooth gear 6.5 inches in diameter, with 12-tooth pinions and an escapement 3.5 inches in diameter," and so on, he rattles off.

Kovacich also fashioned an "endless rewind system," modeled on one invented around a century ago but using a small electric motor tripped by a mercury switch, to constantly rewind the pendulum and keep it moving the gears.

Berghold wanted the mechanism to slide on synthetic rubies, which reduces friction.

Dysart researched the original craftsman, George Colpitts, who not only hammered horseshoes around Livingston but also served as a town alderman, a Park County assessor and maybe a deputy.

The blacksmith's touch shows elsewhere in the inn. He also made the fireplace andirons and the wrought-iron straps on the massive wooden doors around the time the inn was built in the winter of 1903-04, Dysart says, though he adds that the exact history remains "a little murky."

Not much is known about the original clock, Dysart says.

"You're lucky to find a (historical) photo of an interior, even of the Old Faithful Inn," he adds.

Dysart's research convinced him that at least the clock's face, pendulum, counterweights and wrought-iron brackets are original.

Satisfaction in the work

The revived clock--with metal arms instead of the old wooden ones--began ticking in mid-September, maybe fittingly with no ceremony. Now the clock strikes every hour, as if nothing had changed. "I think we did it very authentically, stylistically and colorwise," Berghold says.

"Anything to do with maintaining these historic buildings in their original condition is very helpful," says Cheryl Matthews, a park public-information officer. But Berghold says his team is still waiting for its \$5,000 payment for the job. Matthews says the money will likely come from a special account the concessionaire pays into for maintaining the old public buildings. The payment won't even cover all the labor and parts sunk into the job, Berghold says, but he figured that all along.