

cylinder, the engine running on a track and turning the cylinder just as a squirrel might turn the cylinder in a cage. (People kept squirrels in cages back in 1897? -Ed.) The engine, being started, climbs up its track and turns the drum by its own weight, the drum moving over the water by means of paddles projecting from its outer shell about a foot. The steering gear consists of a steel blade on the lee-board principle, projecting down into the water from each end and lifted or lowered by chains. The smoke will escape by pipes from either end, the inner cylinder being of course open at the ends.

"Mr. Knapp believes his new boat will make a speed of a mile a minute, and so it may in rolling before a gale, but going against a gale will be quite a different matter. It seems ungracious to have to discourage a thing before its trial, but it is to be feared that Mr. Knapp has not made any mathematical calculations of the enormous force of a gale acting on the broadside of so large a drum elevated so largely out of the water, and he has evidently not considered that though his engines are to be 150 horse-power, their effective power will be limited to a proportion of their weight plus that of the framework, etc., in which they are set. There are other difficulties which are likely to crop up on trial..."

And so, criticism of "Knapp's Folly" had begun even before she was in the water. That was not at all surprising, because the ROLLER BOAT was such a drastic change from anything known in lake marine circles up to that time. Lake shipping was a fairly traditional and conservative enterprise, and the whalebacks of Alexander McDougall were about the most "far-out" things the lakes had seen. Until Knapp's ROLLER BOAT came along, that is...

As built, the ROLLER BOAT was indeed a strange sight. She was a long tube with small and seemingly ineffectual longitudinal "ribs" placed around the outer shell amidships to serve as "paddles". The tube ends were tapered inward as at the end of an uncut cigar, with a circular opening 15 feet in diameter at each end. Two "stovepipes" stuck out and up, one at each end, to vent the boilers, and they produced copious clouds of black smoke when the boat was operating. There were no pilothouses at the ends as in Knapp's original plans, but rather at each end was placed a small and rather rickety-looking open platform with a simple wooden railing around it. The platforms were, of course, attached to the inner structure, not the outer one, so that they would remain level and not revolve as the outer hull turned.

According to an article appearing in the "Toronto Telegram" of September 9, 1897, "Instead of having a heavy stationary cylinder around which the outer part would revolve, it was decided to have nothing at all in the centre of the hull. At either end there is to be a platform, resting upon wheels which touch the revolving part. This platform will be weighted and remain stationary... On the platform will be placed two engines (some other sources say there were four engines) with upright boilers behind them. These engines will transmit power to a huge driving-wheel, placed between them, and this wheel will, by a system of cogs, cause the hull to revolve. There will be a platform similarly equipped at each end of the hull.

"The platforms each travel on four big driving wheels and weigh about fifteen tons, with engines and boilers complete... (Unfortunately, we have absolutely no official details about the the size or type of the engines or the boilers of the ROLLER BOAT -Ed.)

"The engines are ready to put in position, and the four big flywheels are being finished. They are each four feet across, and the belt surface is of paper, which is put on at great pressure and bolted in between the flanges. On each shaft is a sprocket wheel, and chain will gear each to the shaft driving the wheels that will carry the platform around inside the cylinder. There will be mechanism to lock the machinery so that the platform cannot run around on their ways, and the cylinder will be stationary on the water.

"The paddle wheels will likely be run the whole length of the boat (as we