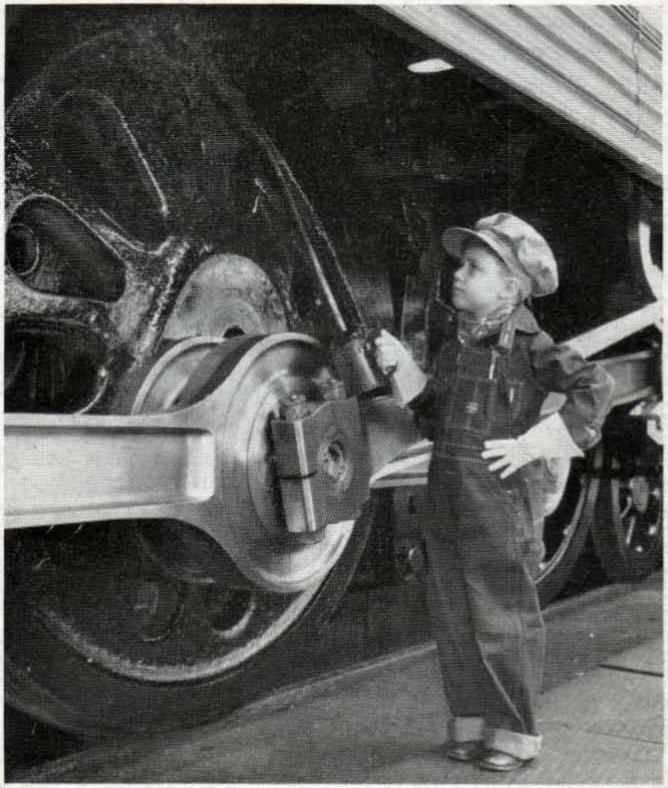
AEOLUS

Aeolus (pronounced ee'-o-lus) was the ruler of the winds in Greek mythology. He was the son of Neptune, and Jupiter made him keeper of the four winds—Boreas, Notus, Eurus and Zephyrus (from which the Burlington Zephyrs take their name).

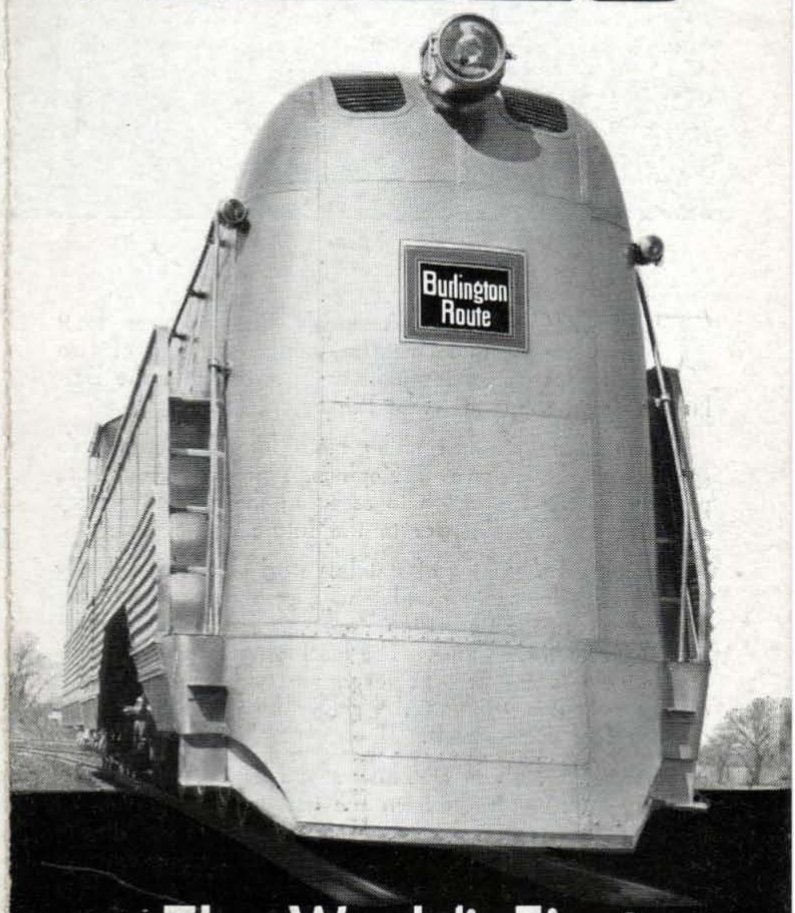
Aeolus, according to legend, kept the winds in a cave on an island in the Mediterranean and let them loose only to further his own designs or those of the other gods in producing storms or favorable winds. Poets describe him as virtuous, upright and friendly to strangers. He is represented pictorially as a vigorous man, supporting himself in the air by wings, and blowing into a shell trumpet like a Triton, while his short mantle waves in the wind.

The relationship between the ancient Greek gods, Aeolus and Zephyrus, and the modern transportation marvels, the "Aeolus" and the "Zephyrs", is obvious. Each is the essence of power and fleetness.

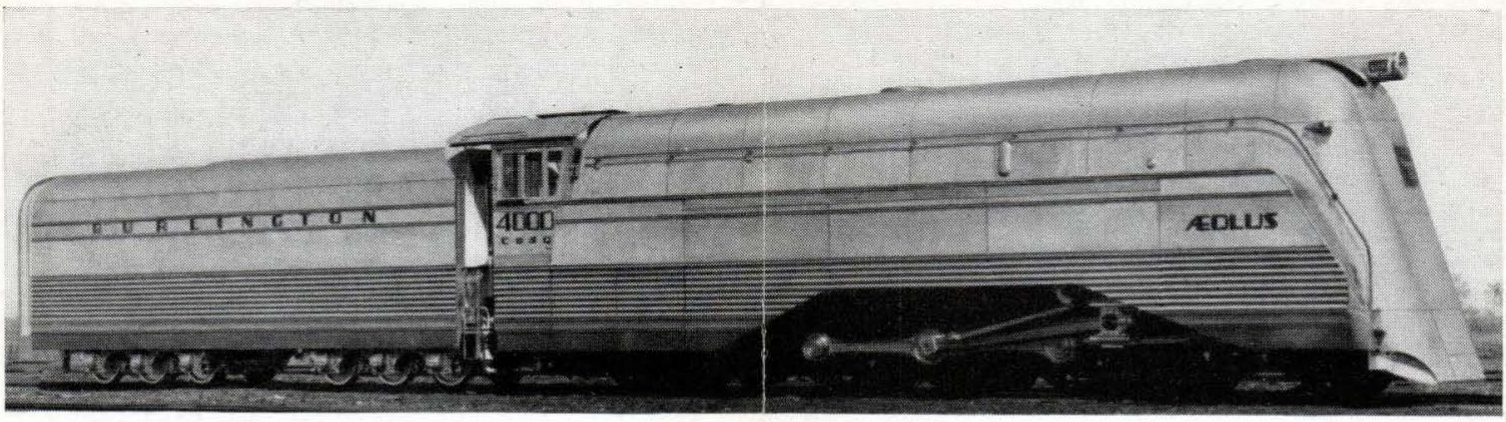


A big oil can but no place to squirt oil.

THE AEOLUS



The World's First STAINLESS STEEL STREAMLINE STEAM LOCOMOTIVE



THE "ÆOLUS" is America's first stainless steel streamline steam locomotive, and is the first of two such super-speed locomotives being built in the Burlington's own shops at West Burlington, Iowa.

This thrilling steam running mate for the Burlington's spectacular diesel-powered Zephyrs, represents a definite program by the Burlington to ascertain the respective roles of steam and diesel-power in the future of railroading.

Streamlined sheathing of stainless steel almost completely encases both locomotive and tender, giving them a striking resemblance to the Burlington Zephyrs. Engine and tender are 94 feet 6 inches long. The most extraordinary features of the new locomotive, however, are to be found in the driving rods that transmit the power from its cylinders to the 6½ foot drive-wheels.

A major obstacle in operating steam locomotives at very high speeds has always been the terrific forces set up by the up-and-down and back-and-forth motion of the driving rods and attendant reciprocating parts. On many locomotives these driving rods and parts, on each side, weigh more than a ton. These huge flying masses require great strength to control at high speeds and, even so, transmit severe punishment to track and the engine itself.

To overcome this difficulty, Burlington experts took the latest development in alloy steels, roller bearings and precision fitting and applied them to their problem. With these they found they could lessen weights without sacrificing strength, that they could employ smaller and tighter bearings, and that they could successfully adjust counterbalancing to minimize pounding and vibration.

The result is a locomotive practically vibrationless at 100 miles an hour, and one that pounds the rails only a third as hard as conventional equipment because of its lightweight driving rods and reciprocating parts.

The "ÆOLUS," is what is known as a 4-6-4 type, having a four-wheel truck immediately behind the pilot or "cowcatcher," six drive wheels, and a four-wheel truck under the engineer's cab. It carries 250 pounds steam pressure and burns coal, fed by mechanical stokers.

It will maintain the Zephyrs' fast schedules between Chicago and Denver and between Chicago and the Twin Cities without extending itself. It is capable of speeds well over 100 miles an hour, and cruising speeds of 90 to 100 miles an hour can be continued almost endlessly. Locomotive and tender ready for service weigh 400 tons compared with 216 tons for the two-car Zephyr power unit.

The use of roller bearings, ample power on the drive wheels and additional starting power from a "booster" operating on the rear wheels of the trailer truck permit the "ÆOLUS" to accelerate rapidly. "Electric straight air," similar to the braking system employed on the Zephyrs, insures quick, smooth deceleration.

The huge, streamline tender has a capacity of 24 tons of coal and 15,000 gallons of water. On the 1,034-mile Chicago-Denver run only two stops are required for refueling and six for water. Most of the latter are coincident with regularly scheduled station stops. Extensive use of roller bearings largely eliminates servicing of the locomotive en route and increase its total availability for service.