

kind of flesh, the same kind of sentiment, the same kind of heart power, and the same kind of everything that goes to make up a human being is in you and in me. Let us use it to the very best possible advantage for the other man, and when we are doing that the other man uses his powers to lift you up."

Tank Engine for the Rahway Valley.

The Baldwin Locomotive Works have recently delivered to the Rahway Valley Railroad Company a four-coupled tank locomotive which is shown in our illustration. This engine is in passenger service on a short line having grades of 2 per cent. and 17 deg. curves. As it was desired to run in

and at the same time curves equally well when running in either direction. All the truck wheels are of solid rolled and forged steel, and were supplied by the Standard Steel Works Company of Philadelphia.

The main frames are of cast steel, while the front rails are of wrought iron, in the form of slabs, and are bolted to the main frames back of the rear driving pedestals. A cast steel filling piece bolted in between the upper and lower rails of the main frames, serves as a combined equalizing beam fulcrum and brake hanger support. The guides are of forged steel of the alligator type, and the crossheads are of cast steel. The slide valves are bal-

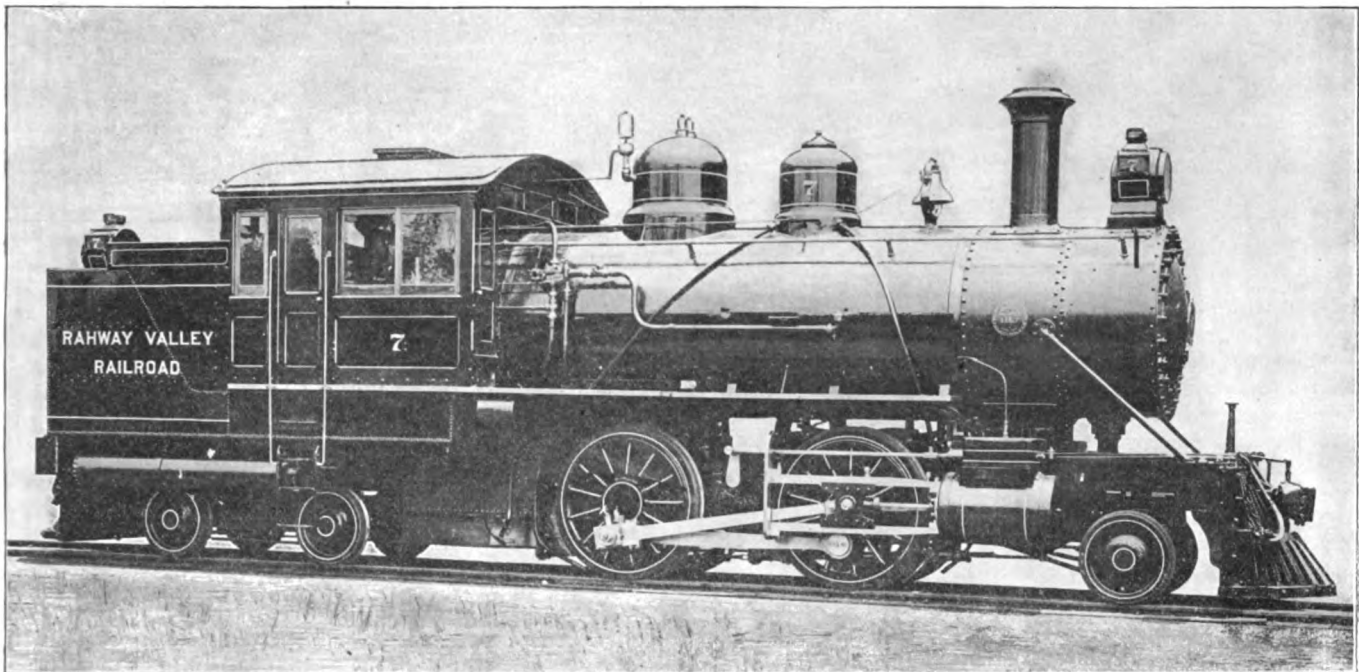
a sloping floor for fuel space. The cab is roomy and comfortable, and is arranged with due regard for the convenience of the enginemen. This is a compact and well-designed locomotive, simple in construction, with all parts readily accessible, and well adapted to the service to be performed. Our half-tone shows the principal features of the design, while the dimensions are given in the table which follows:

Valve, Balanced Slide.

Boiler.—Thickness of sheets, $11/16$ in.; working pressure, 180 lbs.; staying, radial.

Firebox.—Material, steel; length, $78 \frac{11}{16}$ ins.; width, $33 \frac{3}{4}$ ins.; depth, front, 85 ins.; depth, back, $83 \frac{1}{2}$ ins.; thickness of sheets, sides, $5/16$ in.; thickness of sheets, back, $5/16$ in.; thickness of sheets, crown, $3/8$ in.; thickness of sheets, tube, $1/2$ in.

Water Space.—Front, 4 ins.; sides, 3 ins.; back, 3 ins.



2-4-4 TANK ENGINE FOR THE RAHWAY VALLEY RAILROAD.

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Baldwin Locomotive Works, Builders.

either direction without turning, the 2-4-4 wheel arrangement was adopted. The four-wheeled rear truck improves the riding qualities, and permits the use of ample fuel and water capacity without placing an excessive amount of weight on the rear wheels.

The cylinders are 17 x 24 simple and the driving wheels are 56 ins. in diameter and with a steam pressure of 180 lbs. The engine can exert a maximum tractive force of 18,950 lbs. The two-wheeled leading truck of this locomotive is equalized with the driving-wheels by two equalizing beams, placed one on each side of the center line, and fulcrumed under the cylinder saddle. The front truck is thus virtually side-bearing. The rear truck is center-bearing, and is of the usual type, with cast steel swing bolster and wrought iron frame and pedestals. The locomotive is thus supported like a three-legged stool,

anced and are driven by a simple form of Stephenson link motion, having the eccentrics placed on the second driving axle.

The boiler is straight top type, with a deep firebox arranged for soft coal burning. The box is placed between the rear frames and is supported by expansion bearers. A brick arch is provided and it is supported on studs. The boiler shell is 64 ins. in diameter, and the heating surface is liberal for a locomotive of this class. There are 223 steel tubes in the boiler each 11 ft. 7 ins. long, 2 ins. in diameter, and these provide 1,343 sq. ft. of heating surface. The firebox contributes 152 sq. ft., making a total heating surface of 1,495 sq. ft. The grate area is 18.2 sq. ft. and this gives a proportion of 1 sq. ft. of grate area to every 82 sq. ft. of heating surface.

The tank has a water bottom with

Tubes.—Wire gauge, No. 12.
Driving Wheels.—Diameter, outside, 56 ins.; journals, $8 \times 8 \frac{1}{2}$ ins.
Engine Truck Wheels.—Diameter, front, 30 ins.; journals, 5×8 ins.; diameter, back, 30 ins.; journals, $5 \frac{1}{2} \times 10$ ins.
Wheel Base.—Driving, 7 ft.; total engine, 31 ft. 4 ins.
Weight.—On driving wheels, estimated, 70,000 lbs.; total engine, estimated, 136,000 lbs.
Tender.—Tank capacity, 2,500 gals.; fuel capacity, 3 tons.
Service.—Passenger.

The Car Ferry, owned by the Grand Trunk Railway and running between Coburg and Charlotte, was built by the Canadian Ship Building Company of Toronto, Ont. In the August issue of RAILWAY AND LOCOMOTIVE ENGINEERING the Polson Iron Works was incorrectly mentioned as the builders.

I knew a wise man who had it for a byword when he saw men hasten to a conclusion: "Stay a little, that we may make an end the sooner."—*Bacon*.