

on a limestone bottom. This engine is provided with a patent water heater and a Scanlan patent wind receiver and heater, capable of raising the temperature of wind to about 200 degrees Fah. before entering the hot blast stove.

AUXILIARY BLOWING ENGINES.

These are of the horizontal type, with two cylinders, each 40-inch diameter by 40-inch stroke, and are geared to be driven either by a horizontal steam engine of 14 x 20-inch cylinder, or by water-power. These engines are complete with their own wind receiver and pipes, and are so arranged that they can be used in case of an accident to or a shut down of the Weimer engine. They deliver about 2,100 cubic feet of air per minute, with a pressure of $4\frac{1}{2}$ pounds. The whole is set up in an engine house entirely separate from the Weimer, and is isolated from the latter and the boiler house.

STEAM PUMPS.

One Blake duplex pump, 12 x 7 x 12; one Holly boiler feed pump, 8 x 10 x 4; one Niagara boiler feed pump, 6 x 4 x 6; one Northey volume pump, 6 x 5 x 7.

FORCE PUMPS.

One horizontal force pump, 4 x 8; one double-acting Plunger force pump, 5 x 10.

All the above steam and force pumps are so connected that they can be used either on the furnace water jackets, tuyeres, for general fire purposes, or for boiler feed.

All the suction pipes in connection with the new engine house are laid through a stone tunnel, which leads from engine-house to river, and are always beyond the action of frost, and so arranged that alterations or repairs can be made at any time, as the tunnel is large enough to allow a man to pass or work.