

THE TAYLOR HYDRAULIC AIR COMPRESSOR.

Reference has already been made to the air tube which forms a joint between the ends of the chambers and the ends of the reaches and which is inflated with compressed air, when it is required to make the joint. This air is supplied by a compressor, built under the patents of the Taylor Hydraulic Air Compressing Co. of Montreal, and is located in the south-west corner of the main well. It receives its supply of water from the upper reach and the air is compressed by becoming entangled with the water at the point of inlet, dragged down by the water to a depth considerably below that at which the water escapes, and afterwards collected below and thence delivered into the pump-room. The inlet of the water indicated on the masonry plans is about 13 feet above the outlet, which may be seen passing over the top of the main wall, and into this the inlet or feed-pipe delivers. The headpiece is a device separately patented whereby air is admitted so as to become entangled with the inflowing water.

It is connected through its base by an 18-inch pipe to a tank 85 feet below it. The connection at the lower end of the pipe is made on the side of the tank where the water is given a horizontal and rotary motion, allowing the air to collect in the conical top of the tank. A 4-inch pipe is attached at the top of the cone, delivering the air at the required destination. The lower tank, 11 feet in diameter, is open at the bottom, permitting the water to escape after the air is released. The water then rises around the outside of the tank and up the 42-inch shaft in which the 18-inch down-pipe, before referred to, is placed, and escapes at the outlet above the level of the top of the roadway. The pressure of the air is that due to the column of water from the water-line in the lower tank to the level at which the water escapes in the outlet at the roadway level. The lower chamber also forms a reservoir for, as well as a collector, of the compressed air; the compressor is automatic in its action and runs continuously, a safety valve being provided to allow the air to escape when too much accumulates below.

From the pump-room the compressed air is led in pipes to the various places at which it is required to be used.