

Two Bury (Erie, Pa.) compressed air pumps, 16" x 10", 180 r.p.m., which will give up to 20 lbs. air pressure.
 Two Westinghouse motors, 50 h.p., 720 r.p.m.
 Two leather belts, 9" and 10", 15' 3" between shafts of pumps and motors.
 Two 8' x 8' x 3' 6" concrete beds of about 1 to 12 mixture.
 Four 8" x 8" x 16' timbers.
 One tank for cooling and muffler, 6' x 16', tested to 135 lbs.
 One building, 24' x 30', for housing plant. This is built in sections and may be easily taken apart and set up in any location.
 Wiring and 6" piping for air lines. (The switchboard is built in panels and, like the building, may be moved easily at any time. This whole plant may be taken down and moved to a new location in 10 days.)
 Air locks, consisting of a bulkhead at each end with a square opening in which is built a steel frame with steel door, the outer door opening into the lock and

1 tank	225
2 belts	200
Concrete beds	100
Timbers	10
Building	200

Cost of installing above plant, including wiring and piping, \$330.

Gates	\$ 395
Valves	100

Cost of installing gates and valves, \$112.

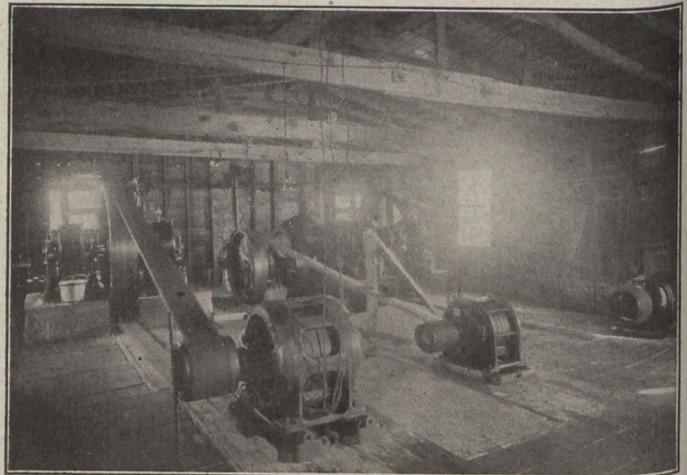


Fig. 6.—Compressed Air Plant.

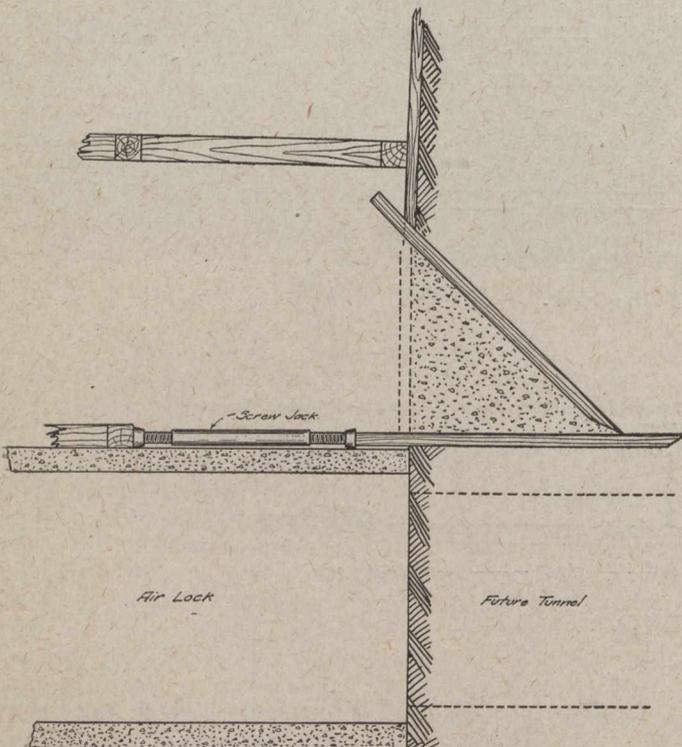


Fig. 5.—Method of Forcing in Wedge to Prevent Escape of Air.

the inner door into the tunnel. (In this case the gates are 16' apart. The air is pumped directly into the tunnel. Valves are placed through both bulkheads. When a man wishes to go into the tunnel, he walks into the lock and closes the outer door. Then he opens the inner valve which allows the air from the tunnel to escape into the lock, making the pressure in the lock gradually as great as that in the tunnel. He then opens the inner door and proceeds into the tunnel. On coming out, he closes the inner door and opens the outer valve, allowing the air in the lock to escape into the outer atmosphere till the pressure becomes normal.)

The costs of the plant, installation and operation are as follows:—

Cost of Plant.

2 compressors	\$3,000
2 motors	1,300

Maintenance.

Power	\$360 per month
Oil and waste	20 " "
Wear and tear	20 " "
Operation	350 " "

On an average, 500 ft. of sewer are built per month; therefore, compressed air costs \$1.50 for each foot of sewer built. The size of this sewer is 3' 4" x 5', 3-ring, egg-shaped.

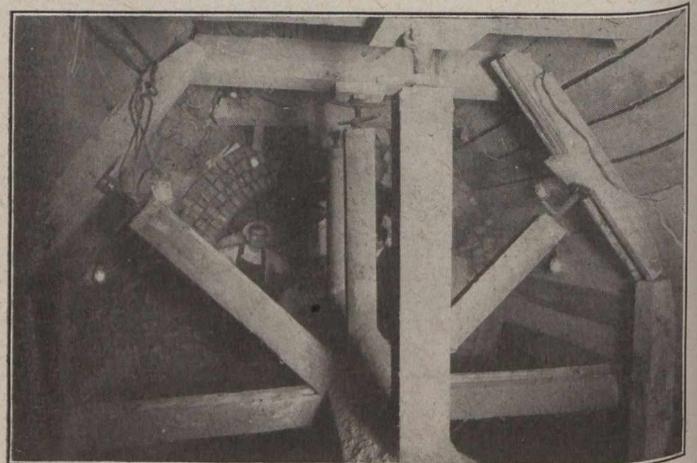


Fig. 7.—Needle-beam Method of Supporting Sheet piling.

The following is the cost of a 2,000 cu. ft. capacity plant at present being used by Messrs. Fussell and McReynolds on St. Clair Avenue, to whom we are indebted for this information.

Two Bury air compressors each 1,000 cu. ft. capacity, 16" x 10", 185 r.p.m., will give 30 lbs. pressure.
 Two Westinghouse motors, 50 h.p., 720 r.p.m.