

**THE IDEAL INCINERATOR.**

The City of Berlin, Ont., has just opened a new incinerator plant which was designed and built by the Ideal Incinerator and Contracting Company of Toronto. The plant has proven to be one of the best in efficiency and smallness of cost in running. The following will be of particular interest to engineers and those interested in the technical details of the incinerator:

It is constructed entirely of fireproof material. The first story is built of concrete; the dumping floor above the furnaces is reinforced concrete; the second floor is of steel and corrugated iron, and the smokestack is of brick.

The furnaces interiors are built of fire brick with asbestos packing and common brick and concrete, the whole construction being held in place by a series of rods and buckstays.

Each furnace working independently of the other, enables the plant to be in operation constantly. This feature is an economical factor of no mean importance. Again, the plant is so constructed that it can be easily cleaned and in a short space of time.

By this system all garbage is dried thoroughly before it is burned. The combustion is perfect, heated oxygen water gas containing hydrogen being admitted into the combustion chamber at all times by this special process.

Being a combined incinerator and crematory, animals can be easily disposed of, a carcass of a horse or a cow being converted into ashes inside of 2½ hours without having to be cut up or slacking the speed of the furnaces.

The plant will take care of 15 tons in about 10 to 12 hours, 30 tons in 24 hours, but if the additional cell is built, for which the building is already designed, 45 tons can be disposed of, which capacity is equal to the requirements of a city twice the size of Berlin.

The plant is complete with office, wash and clothes room and toilet, and electrically lighted inside and arc lamps on the approaches, water and sewer conveniences are also provided for.

The Dumping Platform—All garbage and refuse is hauled to the approaches and then dumped here to be fed into the furnace.

Charging Holes — All garbage and refuse deposited through the manholes, falls into the drying hearth below.

Drying Hearths—This drying hearth slopes towards the grates, and is in a direct line with the heat and flames on their way to the combustion chamber. At this point all combustible material is rapidly destroyed and the wet matter is quickly and efficiently dried by heat penetrating through it. When dry, this material is raked over the fire-grate.

Fire Grate—The fire-grates are fed from the drying hearth above where all refuse is reduced to ashes and incombustible clinkers.

Pull Down and Clinker Door—The pull-down is situated in the centre of the clinker door and is used for stoking the fire. The big clinker door gives easy access to the entire grate area, which is very necessary when employing forced draft and it is opened by counterbalance weights.

Draughts and Air Ducts—The motor driver suction fan draws through the ducts all foul air, smoke and dust arising from the charging floor and furnaces below. Thus not allowing any odors to arise from the plant.

This air is then carried to the generator where it is heated by waste gases, then conducted to the ash pits under the grate burned in the combustion chamber.

This hot forced draught is a most essential feature in burning large quantities of manure, night soil, etc., and it saves additional fuel, and adds to the rapidity and efficiency of its destruction.

Combustion Chamber and Flue—They are so constructed to burn all gases; collect all dust and carry the smoke off in an unoffensive condition.

Second Combustion Chamber and Preheater—The second combustion chamber is designed to burn all gases that emanate from the cremating of animals; also insuring perfect combustion of all gases that escapes from the First Combustion Chamber in damp days, or when the fires are low in the furnaces.

The Preheater is constructed inside the flue and heats all the air for the furnaces.

Dust Pockets, Paper Screens and Dampers—The dust pocket catches all the dust and prevents any going up the stack. The paper screen catches all the loose burning paper from out of the stack. The damper is to regulate the draft of the chimneys.

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