(3) It is also recognized from experience with English destructors that municipal garbage has a distinct heat value which can be applied to the raising of steam for power purposes. shown immediately behind the chimney stack in the general view. An interior view of this shed and tipping platform is shown. The refuse is dumped direct from the collection carts into two large bins through the openings in tipping platform.

(4) It is recognized that the existing rates for light and power in Westmount are altogether too high and could be reduced by a municipal lighting plant which would utilize the heat value of the garbage for steam raising.

By the end of 1906 a combined electric lighting and ineineration plant were in operation and with a success beyond expectations. In the year 1909, on account of increase in population, it became necessary to increase the capacity of the destructor and power station. The original destructor installed was a three-cell, continuous grate, Meldrum furnace, of 50 tons eapacity per 24 hours. The second unit installed during the past winter is a 50-ton, three-cell, continuous grate, Heenan patent furnace, designed and erected by Messrs. Heenan & Froude, of Manchester, England. The design of this furnace,



Foot of Bin Showing Opening into Charging Container.

while following generally that of the furnaces used in the British Towns generally that of the furnaces used in the British Isles, has been modified to some extent to suit the different different conditions existing in this country caused by the difference in seasons, different composition of garbage and refuse to large hard within a refuse to be dealt with. The two furnaces are placed within a specially much plant is situated ^{specially} designed incinerator building. The plant is situated on the Cl ^{on} the Glen Road, in Westmount, at the point where the land level ehen level changes abruptly by some 35 or 40 feet. The site is peculiarly peculiarly advantageous for a destructor plant, as will be seen by the by the general view. This photograph was taken from the Canadian bight by the general view. Canadian Pacific Railway tracks on the higher level. The power place for the second poiler house and power plant building in the foreground and boiler house and incinemater in the foreground and boiler house and incinerator building in the foreground and builder the lower level; it building in the background, are all on the lower level; it was not, therefore, necessary to provide an inclined roadwar, was not, therefore, necessary to provide an inclined roadway to the top of the furnace. The refuse collecting carts drive in for drive in from St. Catherine Street by a road on the higher level without without any incline to the tipping floor.

The incinerator building is constructed throughout of conerete. The roof is flat and constitutes the tipping platform, and is enclosed by a steel frame and corrugated iron shed, which is

view. An interior view of this shed and tipping platform is shown. The refuse is dumped direct from the collection carts into two large bins through the openings in tipping platform shown in photograph, one being for each furnace and having a capacity of about 40 cubic yards each. Inside the building these bins slope toward the charging platform, which is situated directly over the furnace. These bins are constructed entirely of iron and are equipped with doors so that when refuse is being dumped no dust enters the incinerator building. A view is shown of the foot of the bin and charging platform. It will be seen that one door of the bin is open and three cells of the furnace. The refuse is raked from the bin into the charging containers, the open doors of which are shown. When the containers are filled, the top door is closed and a bottom door opening immediately into the furnace is opened, the contents of each container being almost instantaneously deposited into the furnace. The operation of charging and clinkering is performed in a regular routine, and in such a way that a mean even temperature is maintained in the furnace.

A front view of the incinerator is shown. The three large doors are used for withdrawing the clinker from the respective cells. This clinker is loaded on a car which travels on the overhead single rail shown, and is conveyed outside to the clinker yard. Below the clinker doors are shown the small doors to the independent ashpits, and to the left of each door is the valve regulating the hot air supply to each grate. The products of combustion from the three cells pass through one opening into a common combustion chamber, the door of which is shown at the extreme right of the illustration. In this chamber the gases are completely intermingled and are thoroughly burned before coming in contact with the cold surface of the boiler. An essential feature for the successful operation of a refuse destructor is that the temperature in this combustion chamber shall be maintained above 1,400 degrees F., thus effectually destroying and consuming all noxious gases and absolutely ensuring the operation of the plant without nuisance. A proof that this is accomplished in the case of Westmount is the proximity of residences on the lower level as shown in the general view of the plant, and the still closer proximity of fine residences on the higher level. The authorities state that no complaint has ever been made, nor has any perceptible odor ever been detected from the gases from the chimney.

The combustion chamber also performs the office of a dust collector, the fine dust being deposited in the bottom of the chamber. This dust, while not utilized at Westmount, is in some European plants used for the purpose of manufacturing a disinfectant powder. The combustion chamber is equipped with a large door so that it may be used for the cremation of carcasses. It is only within the past few weeks, however, that use has been made of this facility. Hitherto all carcasses have been disposed of by special contract. The Westmount authorities now find that they can more effectually dispose of the carcasses in their own incinerator at considerably less cost. In future, therefore, the combustion chamber of the incinerator will be used for this purpose.

After leaving the combustion chamber the gases pass under a Babcock & Wilcox water tube boiler rated at 200 horse power, the steam from this boiler being utilized in the electric lighting plant. After leaving the boiler, the gases pass through a regenerator or air heater. This, as its name implies, is used to heat the air for combustion at the expense of the waste heat in the gases. After passing through the regenerator, the gases enter the main flue and pass up the stack. As an indication of the extent to which the heat is utilized, it will be seen by referring to the data given later that while the average temperature in the combustion chamber is 2,000 degrees, the temperature after leaving the boiler is reduced to 652 degrees, this being still further reduced after passing through the regenera-