



Fig. 7.—General Layout of Oil Burners

cap of the rear bearing is water-cooled. The front bearing is smooth, which permits sufficient lateral movement to take care of the expansion and contraction of the drum when it is alternately heated and permitted to cool off. The drum is driven by a manganese steel beveled pinion and heavy beveled driving gear with a 5-in. face. The cold stone elevator is driven by a heavy chain and sprocket as shown in the illustration. When firing this drier with oil the grate surfaces are covered over with a loose layer of brick. In the event that oil should temporarily be unavailable, it is a simple matter to remove these brick and use coal.

Fig. 6 shows standard weigh boxes, which are equipped with a flanged shutter gate, the bottom of the discharge chute being composed of a flipper gate, which, when reversed, permits of by-passing of a rejected batch directly downward through the mixer platform into a wagon if desired.

Fig. 8 illustrates the method of suspending the asphalt weighing bucket, using a two-beam scale, which



Fig. 8.—Asphalt Weighing Bucket

greatly facilitates the weighing of the asphalt, as it permits balancing the bucket and obtaining the correct weight without figuring the tare.

Fig. 7 shows the general layout of the oil burners, which heat the bitumen and sand, and were supplied by W. N. Best, Inc., New York City. It will be noticed that a combustion chamber is used at the burner end, the present grates being covered with firebrick to protect them from excessive heat. Oil is an excellent fuel for asphalt work, owing to the fact that the temperature can

be controlled perfectly and the maximum output can be got from the plant. It is also economical, as when the dryer becomes too hot the flume from the burner can be turned off completely or reduced at will.

With oil burners the sand dryer can be heated sufficiently to pass sand through in about fifteen minutes, whereas with coal two or three hours were taken up in heating.

About 300 gallons of oil are consumed daily at the city plant with five burners, ordinary fuel oil being used.

The superintendent of erection was Mr. MacDonel, of the Warren Bros. Co.

TENTATIVE RECOMMENDED PRACTICE FOR LAYING SEWER PIPE

At the recent annual convention of the American Society for Testing Materials the following recommendations of Committee C-4, of which Mr. Rudolph Hering is chairman, regarding practice in laying sewer pipe were accepted for publication as tentative standards of the society.

Preparing Trenches and Foundations for Pipe Laying

The foundations in the trench should be formed to prevent any subsequent settlement and thereby possibly an excessive pressure and consequent rupture of the pipes.

If the foundation is rock an equalizing bed of concrete or sand well compacted should be placed upon the rock. The thickness of these beds should be not less than 4 ins. Pipes should be laid in these beds so that at least the lower third of each pipe is supported its entire length.

If the foundation is good firm earth, the earth should be pared or molded to give a full support to the lower third of each pipe and, if necessary to secure a proper bearing for the pipe, a layer of concrete, fine gravel or other suitable material should be placed. The same means of securing a firm foundation should be adopted in case the excavation has been made deeper than necessary.

If there is no good natural foundation, the pipes should be laid in a concrete cradle supported on a masonry foundation carried to a soil of satisfactory bearing power or supported on a structure designed to carry the weight of pipe and its load to a firm bearing.

Trenches should be kept free from water until the material in the joints and masonry has sufficiently hardened.

To protect pipe lines from unusual stresses all work should preferably be done in open trenches.

Pipe lines should be placed at a sufficient depth below the surface of the street to avoid dangerous pressure or impact. When this is not possible special reinforcement should be provided.

Trenches should be only of sufficient width to provide a free working space on each side of the pipe, according