

of the annual waste is beyond any effective remedy.

This whole controversy emphasizes the need of proper training for the semi-technical workman. The spread of technical schools will produce, as time goes on, a host of men fit for the shops, for the supervision of freight traffic, for the handling of track work. Only a few years ago the big Canadian railroads cooperated in establishing a sort of railroad school in connection with a Canadian university. To-day they draw from it dozens of young men fit for the railroad service. As the years go on this process will result in increased efficiency all around. Our own technical schools, the large locomotive companies, and the big car-building companies are graduating every year hundreds of young men for the service of the railroads. This is the ultimate solution of this problem of waste.

But there is need of more system on the railroads. The railroad world needs more presidents like Mr. Harriman (his financial activities apart)—men who personally go out and watch their railroads, keen for every improvement in operating methods, eager for traffic efficiency. The railroad field has not been cursed so much with dummy directors as it has with dummy officers. The railroad kings of to-morrow must know their railroads better than the kings of yesterday knew theirs.

Drop-Hammer Foundations

The E. W. Bliss Co., Brooklyn, N.Y., builder of drop forge hammers, contributed

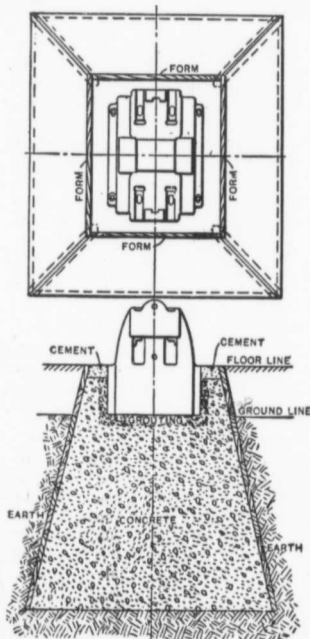


FIG. 1.

the following information regarding the construction of drop-hammer foundations.

The endurance and effectiveness of drop-

hammers depend in no small degree upon the proper ratio between the weight of the base and the weight of the hammer. It has been demonstrated that 12 to 1 is decidedly better than a smaller ratio, and that the best results

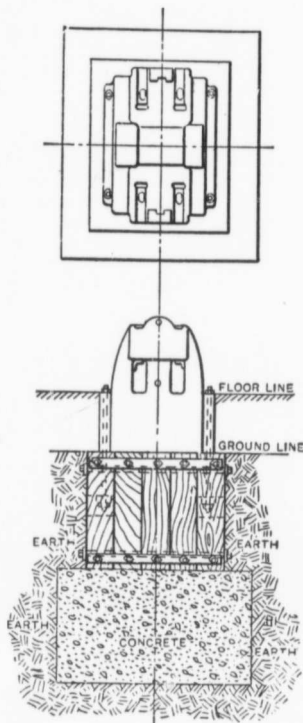


FIG. 2.

are obtained with a ratio of 15 to 1 or 16 to 1 with all parts made in proportion; the extra cost of the heavier machine being more than compensated for by the larger quantity and better quality of the finished product and by the comparative freedom from breakdowns.

For the successful operation of drop-hammers, it is very essential to have a good foundation. Both of the types here illustrated have been found to give good results. The wood cushion foundation, as shown in Fig. 2, is used where the bottom is not good and where the jarring of the surrounding buildings is objectionable. The solid concrete foundation shown in Fig. 1 is recommended as best when it can be used, as it is like a continuation of the base on the hammer, and therefore makes the drop more efficient. In deciding the depth of foundation of either of the above types, care should be taken to determine the best point to stop the excavation. Bed rock is the best bottom, cement gravel next best, and a strata of sand or clay, say 4 feet thick, and in its original and undisturbed condition, also makes a good bottom. The trouble with the sand or clay is that on account of the heat of a drop forge shop drying the soil and a continual jar, they are apt to shift provided they get an outlet in the shape of other near excavations. By

spreading the bottom of the foundation the desired result is sometimes obtained without going very deep, but for any size of drop hammer the concrete should not be less than 4 feet thick, whether the wood cushion is used or not.

Meeting of A.S.M.E.

The season of professional meetings of The American Society of Mechanical Engineers will be opened on Tuesday evening, October 13, by a meeting of the Gas Power Section in the Engineering Societies Building at 29 West 39th Street, New York.

Mr. H. L. Doherty, chairman of the Meetings Committee of the section, will present a report for discussion outlining plans for future work and there will also be a discussion of standards to be used in gas power work.

Two papers will be read, one by E. A. Harvey on gas producer plants, with data upon costs, performance, etc.; and one by N. T. Harrington, giving the results of tests to determine the loss of fuel weight in a freshly charged producer, due to increase of ash contents in the fuel bed. The first paper will be illustrated by lantern slides, showing actual plants and plans for the arrangement of apparatus.

Politics at Steel Mills

A special despatch to the New York Times from Granite City, Ill., says that the 1,200 employees of the American Steel Foundries Co., at Granite City, found in their last pay envelopes a circular letter, which by implication lays the blame for the recent financial troubles upon the Republican National Administration. The circular in part reads:

"You have been out of work for a long time. Why have you been out of work?"

"Because the company that has been giving you employment had no orders for its goods."

"Why has it had no orders?"

"Because the railroads and other persons and corporations with which it deals could not buy supplies."

"Why could not the railroads order supplies?"

"Because they could not borrow money, for the reason that nobody would loan it to them. The business of the railroads was crippled by the hostile attitude of the present Administration and by the adverse legislation of some of the States."

"Why could not the railroads get money?"

"What should you do to get steady work?"

"Talk it over with your neighbors and see what they think. Do then what you think is best for yourself. Remember when the railroads are prosperous we will have work for you and that you will then have money to buy what you need."

The plants of the company, after a shut down for months, resumed recently with about half of their regular force.

Discussing the relative position of various countries as musical centers, Germany seemed to have the most votaries, much to the evident displeasure of one excitable Italian. "Italy is turning out the most musicians, and has always turned out the most," he cried. "Ach, Gott!" exclaimed a German present, "can you plame her."