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## Locomotive Dispatching and Terminal Facilities.

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In preparing this paper I have, as far as possible, aimed to keep clear of the technical and theoretical side, and have rather inclined to the practical or everyday side of the question, having in mind an after discussion somewhat on the lines of the old time bunk-room chats. To my mind there is no department connected with railway operation that so much depends upon as that charged with the dispatching of locomotives. The roundhouse is the most important of all the departments, for no matter what figuring and calculating is done elsewhere or what business may be secured, if, from various causes, the roundhouse fails in prompt and reliable dispatching thus causing detentions, etc., the business will eventually fall off. The dispatching of locomotives embraces many features that may not be known to those not directly connected with this branch of railway operation. The successful and economical dispatching of locomotives depends, in a large measure, on good government, and organization which will bring about team work of the whole staff, and only those absolutely necessary to handle the business carried on should be considered as members of this team; any surplus help will only tend to diminish interest and lead to sloppy work.

In the best organized shops a general tendency will be noticeable towards tidiness both around the premises and with the equipment; the practice of making temporary repairs merely to tide a case over at these points will rarely, if ever, be resorted to. These particular shops appear to be able to handle the business without the necessity for doing work in such a manner as to invite failures; at all times the idea prevails that the efficiency of the road depends upon the condition of the power, which, if first-class, will greatly aid in train operation, and all the statistics being prepared on a basis of tons handled seems to appeal to all concerned; the question of aggressive departmental controversies has no place here, but where a general betterment can be effected, there is no hesitation, but rather a desire to assist, both by example and practice, the other departments, so that the general result on the particular district with which the shop is identified may be a cause for special mention; in this way the credit is shared by all.

In former days it was enough to turn

a locomotive out for a trip with a supply of stores, fuel, etc., that to-day will take care of a machine of double the capacity; then the question of costs for repairs, fuel, lubrication, etc., was not gone into as thoroughly as at present, and it was considered the duty of an up-to-date shop to turn out a fine looking machine without regard to cost. A change in the state of affairs has been brought about by the handling of competitive business, making it imperative that the freight offered at present shall



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be handled with such dispatch as will ensure its delivery as contracted for, and the demands made on the machine, both in the matter of greatly-increased tonnage hauled and in the decrease in time allowed for so doing should be taken into consideration. To-day, careful record is kept of shop expenses, cost of locomotive repairs, fuel consumed, lubrication used, etc. This, along with the possibilities of engine failures and detentions, makes locomotive dispatching somewhat of a difficult problem. It may, therefore, not be considered out of place to look into a few points that may be considered as essential in modern locomotive dispatching; among these the question of terminal facilities that will

permit of expeditious handling of locomotives, is I think, one of the most important, and generally speaking, does not receive the consideration it should, as with the close of navigation the railways are called upon to handle important business promptly in cold and stormy weather, and there should be no question about providing sufficient in-coming and out-going tracks equipped with coal and sand hoppers, ash-pits with proper ash-handling devices, and water cranes of such capacity as will care for the business without detention to locomotives to and from the shop. The turn-table should be looked upon as the key to the situation, and should be of such construction as will enable it to hold up against the weight of the heaviest locomotive in service; it should be preferably power driven. There should be one person specially appointed to take care of its inspection and oiling, and it should be his duty to know beyond doubt, that it is always in satisfactory condition.

The shop should be roomy, well ventilated, and heated, and special attention given to proper drainage from both the pits and floor, thus making it possible for the men to get about without the inconvenience of wet feet, etc., which affects the efficiency of the average man. There should be provision made for a suitable office for foreman, and an engineer's registering room; there should also be a well ventilated rest house for engine crews, equipped with sleeping and dining room accommodation, which will permit of the men getting a warm, substantial meal.

At the principal shops that are responsible for the upkeep of locomotives, there should be provided tracks of sufficient capacity to take care of locomotives out of service on account of waiting repairs, traffic conditions, etc., and also wheel tracks sufficient to take care of new and old wheels kept in stock. There should be both driving and truck wheel pits, and all pits should be provided outside with jacking planks or timbers. There should be appliances for loading and unloading wheels, suitable lorry tracks for trucking heavy materials, up-to-date boiler tester and hot water washing out plant, with pits specially allotted and constructed for this purpose, special care being given to bad water districts. There should be sufficient modern machinery to take care of the proper maintenance of tire work, driving boxes and wedges, pistons, valves, and motion and rod work, also a proper blacksmith and boilermakers' equipment; all obsolete tools originally used for repairs to the smaller power should either be disposed of or scrapped.

The roundhouse staff should be looked