the fact, have been endeavoring to evolve a more suitable system. The system that has been considered to be the nearest approach to success is known as the Graphic Car Record System, but this system has also got its drawbacks, which the car accountants have been endeavoring to overcome during the past two years. This system, which has been in use on the C.P.R. for several years, is a very radical change from the old book form of records, as the use of books & pens is abolished. It consists of:—

1st. A box 8 ins. deep, 14 ins. wide, & 36 ins. long, which is divided longitudinally by copper wires into 10 equal spaces, each space 1 inch wide.

2nd. A stick 8 ins. long, 1 in. wide, ¼ in. thick for 1 in. from each end, & ⅛ in. for the 6 ins. in the centre. A grove is cut at each end to allow a piece of cardboard to be inserted. One end of the stick is flat, on which a piece of paper representing the car number is glued, the color of the paper designating the class of car; a brass nail is also inserted in that end so that any particular stick may be readily taken from the case. The other end is slightly bevelled so as to admit of it being quickly placed in the case.

3rd. A piece of cardboard 6¼ ins. long & 1 in. wide, which may be inserted in the grooves in the stick. The stick is the same length as the depth of the case, & the same width as the distance between the copper wires, so as to allow of it being placed in the box.

The box is built on an angle of 45° to prevent the stick from dropping out. The movements of the cars are entered on the cardboard, which is inserted in the stick, those of loaded cars in black pencil, & empty cars in blue. To facilitate the recording of the movements of the cars, the stations are designated by numbers & the junction, or interchange points, with other roads, by symbols. The boxes are divided into 10 divisions by copper wire, so that the stick may be filed according to the ending unit of the number shown on end of stick; for example, stick no. 12201 would be placed in the 1st division, & stick no. 12205 in the 5th division. In this way, if 400 sticks were in the case only an average of 40 would be examined for any particular number. As many of the boxes as are necessary are placed on a stand built for that purpose, & are again subdivided into sections by movable trays to suit requirements. The clerks have then before them one large case divided into sections & stations of the road, the sections of stations running in proper order from east to west. Branches intervening are allotted a box next to the station at which the branch connects with the main line, & all the cars represented by the sticks are located in the case in the same section or station as the car is located on the line. There is also another small case set apart for cars on foreign roads, each road being assigned a space commensurate with its requirements.

The movements of the cars are recorded from the train conductors reports, & one division of the case, representing a division of the road, is under the charge of one clerk, who records the movements of all the cars on the reports for that division. Thus, the reports are handled only by that clerk, instead of perhaps by several, as is the case when the book records are used. The saving of time is obvious. When the car moves from one station or section of the line to another, the movement is entered on the stick, which is also moved in the case, so that the work of locating the cars is always being done, & the car accountant can at any time say where the equipment is. This can not be done from the book record without a great deal of labor. It may be claimed that a clerk cannot record as many movements of cars by the graphic car record system as by the book system, but a prominent car accountant who adopted this system 4 years ago states that one of his clerks records 1,200 movements daily, which is more than can be claimed for the book record.

There are many benefits to be derived from the graphic car record system, one of which is, that cars delayed on a division where cars are required can be traced without interfering with the clerk recording the movements of the cars in that particular case; for example, a road running from Chicago to California may, at certain seasons of the year, require cars in California, while a large surplus of cars are on their tracks in the vicinity of Chicago; therefore, that part of the case in which the sticks represent the cars in Chicago territory is not interfered with, while the tracing for cars delayed on other divisions in the vicinity of where they are required is being done. This would be an utter impossibility with the book record. Another good point of the graphic system is that the movements made by 1 car during 8 or 10 months & sometimes during 18 months may be entered on one paper. This overcomes the principal objection to the book record, which necessitates bringing forward the movements from one month to another at the expense of a great deal of time & clerical labor.

The Grand Trunk's New Rules.

As announced in our May issue, pg. 68, it was decided that the new rules of the G.T.R. Transportation Department would be put into effect on July 1. These rules are practically the standard code of the American Ry. Association, & have been printed & distributed to the employes. Directly the announcement was made, objection was raised, not by any considerable body of the men, but by the few agitators who are always looking for trouble, certain members of Parliament were loaded up with the idea that startling & unprecedented innovations were to be made, that the System was to be Americanised, & that the management was attempting an unwarranted departure from what was spoken of as a tried & satisfactory system. Member after member got up in the House & spoke in this strain, & though the rules had received the assent of the Governor-in-Council, not even the Premier or the Minister of Railways seemed to understand the question, or to be able to justify the Government in agreeing to the changes.

No one would go further than we would in condemning any attempt to "Americanise" the G.T.R. system, if that meant the displacement of competent Canadians, & the employment of United Statesers in their places, & while there may be ground for discussion of the policy of the present G. T. R. management on that score, the matter under consideration does not involve anything of the sort. The standard code of the American Ry. Association is not in any sense a new thing; it is the result of years of study by the most competent operating officials in America; it is in use on over 170,000 miles of railway in the United States; it is already in force on at least two railways operating in Canada, the St. Lawrence & Adirondack & the Northern Pacific, & we believe it is of the utmost importance that it should be put in force on every other railway in Canada with as little delay as possible, specially on those lines which run into the U.S. The standard rules of the American Association are now undergoing revision by a committee of which T. Tait, Manager of the C. P. R. Eastern Lines, is a member. As soon as this revision has been completed, it is probable the rules will be put in force on all the C.P.R. lines.

While thoroughly in accord with the policy of putting the standard rules in force, it seems to us that the G.T.R. operating officials were perhaps in a little too great a hurry, & that they would have done better had they not attempted to work under the changed rules almost immediately after having them printed or distributed. Two or even three months delay would have made but little difference, & it would have given the men a better opportunity to post themselves. This has since been realized by the officials, the result being that the coming into operation of the new rules has been postponed from July 1 until a date hereafter to be determined. In the meantime each employe required to be familiar with the rules, has been notified to study them carefully, to embrace every opportunity to attend the schools of instruction at the several terminals, & to spare no effort to familiarize himself with the rules, so that he will be prepared for the examination which he must pass satisfactorily before the rules become effective.

In speaking of the new rules recently, a G.T.R. operating official said that the present system in use on that line was not only different from that employed in the U.S., but was not uniform throughout the G.T.R. system. In the matter of train orders, he said, the method of despatching a train differs on three branches of the system. On the Great Western branch the duplicate telegraph order was employed; on the Grand Trunk proper the red & white rear flag & lamp signals were used; while on the Northern the old "Smith & Brown" system was adhered to that had been preserved from the days of pioneer railroading. Under the "Smith & Brown" system, trains were named after the conductor who had charge of them, instead of by numbers. The new train order system, which has been adopted from the American Ry. Association, provides absolute security to passengers, as the engineers & conductors on each train are provided with a copy of the running orders issued, which is a much better method than trusting to an engineer to stand still until the despatcher gives him orders to move.

The difference between the rules in vogue in Canada & in the U.S. was a great source of inconvenience to the G.T. management. A Canadian train crew could not pass over Suspension Bridge & take a train into the yards on the U.S. side, because they did not understand the signals. The G.T., therefore, had to keep a crew of men on the Canadian side who understood the American rules, & placed them in charge of every train crossing the line. The same state of affairs existed at Fort Erie, though on the C. & G. T. the Canadian rules are in force.

It is confessed that the alteration in the hand-lamp signalling is most material, but the G.T. official said the change would have to be made some time, & the men had better learn the new procedure. In this department of signalling the American code has superseded the Canadian.

The objection taken by the men, that the signal to be given from the top of a freight train to let the engineer know it has parted involves danger in its execution, is flatly contradicted by the official, who says the signal was specially contrived that it might be executed while sitting down, in which position a brakeman is safe from being pitched to the ground.

The new rule no. 36 has been the chief cause of complaint among the dissatisfied men. It refers to brakemen & conductors in charge of freight trains, & says: "They must ride on top of the trains as much as possible where they can apply the brakes, if necessary, & see that their brakemen do their duty; they must require all of their brakemen to be on top of the train at least one-half mile before arriving at & while passing all stations & stopping places, descending or ascending grades, or at any point or time when extra precaution is necessary to ensure safety." This rule, said the official, merely requires of brakemen & conductors to do their duty. They cannot attend to their train while lounging in the cab