

(2) Distant Signals—A distant signal post carrying splitting signals all applicable to one line of way is counted as a single unit; but where one or more signal arms on the same post apply to two or three lines of way, the number counted equals the number of lines of way. Similarly with stop signals.

(3) Number of Locomotives—Engines used solely for shunting purposes are included if such engines are required to travel light on passenger roads from shed to shunting yards.

\*a Includes 1,005 home signals, 430 intermediate signals, 1,105 starting signals.

\*b 1,569 of these are permanently fixed at "danger."

† Roads in Scotland.

### A Resume of the Committee's Conclusions

The conclusions of the committee are summarized as follows:

1. The committee is of opinion, after careful examination and analysis of statistics during the past 10 years, that automatic train control presents the only reliable method of preventing a large proportion of train accidents directly occasioned by failures of enginemen to obey signals, which amount to about one-third of the total.

2. It considers, therefore, that a case for the installation of control upon British railways has been made out, and recommends its gradual adoption, in accordance with the list of requisites given.

3. It considers that the system likely to prove most

suitable to prevailing conditions will be of the contact type, designed to operate in conjunction with existing methods of signaling.

4. It regards it as essential that the system of control should be uniform in character, and that all working parts should be of standard design in order to facilitate replacements and to ensure interchangeability.

5. It is of opinion that a complete system of automatic train control should include a train-stop device at selected stop signals, and train control generally at distant signals. It is satisfied from its investigations, however, that control at stop signals is of first importance, as a mean for providing additional security.

6. If, therefore, owing to financial considerations the complete scheme cannot at present be entertained, the committee considers that the preliminary step should be the introduction of control at selected stop signals.

7. It recommends the immediate formation by the railway companies of a committee of experts to determine and standardize track and locomotive apparatus, having regard to differences in structural and loading gages, and the position of conductor rails on electrified railways.

## Labor Board Decides That I. B. of E. W. Has No Jurisdiction of Signal Men

THE United States Railway Labor Board on July 6, issued decision No. 1091, which in effect established a rule that those maintaining automatic signals and electric interlockers, should handle their grievances, etc., according to the regulations applicable to signalmen rather than by those governing the electrical workers. This particular case has to do with a maintainer of an electric interlocking who presented his grievance through the International Brotherhood of Electrical Workers and the Labor Board decided that such cases should justly be under the agreement of the Brotherhood of Railroad Signalmen of America. The decision is given practically in full as follows:

**Railway Employees' Department, A. F. of L.  
(Federated Shop Crafts),**

vs.

**New York Central Railroad Company**

**Question**—Classification and assignment of J. W. Hickey, employed at Calumet river (Chicago) drawbridge. The following questions are involved in this dispute:

(a) Is 50 per cent or more of Mr. Hickey's time consumed in the performance of work such as is designated in rules 140 and 141 of the shopmen's national agreement?

(b) Has the general chairman of the International Brotherhood of Electrical Workers authority to handle a grievance for Mr. Hickey?

(c) Is Mr. Hickey entitled to the first trick at 71st street interlocking plant?

**Statement**—This dispute was filed in *ex-parte* form by representatives of the Federated Shop Crafts on December 6, 1920, a copy of which was forwarded to the management in the usual manner. On March 23, 1921, the carrier replied, stating, in effect, that a jurisdictional question was involved affecting the International Brotherhood of Electrical Workers and the Brotherhood Railway Signalmen of America, and attached for the information of the Labor Board a statement prepared by the general chairman of the signalmen's organization wherein he takes the position that Mr. Hickey is properly classified and paid as a signalman.

On April 28, 1921, an oral hearing was conducted in connection with this dispute, at which time representatives of the electrical workers and signalmen were in attendance. At the

request of representative of the electrical workers, the case was postponed. On May 4, 1921, a joint communication was addressed to representatives of the carrier, representative of the I. B. of E. W. and representative of the B. R. S. of A., stating that in the opinion of the Labor Board the question involved was one that should be handled in conference between representatives of the respective parties to whom this communication was addressed, in an effort to arrive at the facts and accordingly agree upon a national agreement that properly covers the employee in question.

On February 10, 1922, a communication was addressed to the Labor Board by a representative of the Railway Employees' Department, A. F. of L., in behalf of the electrical workers, wherein a statement was made that, acting in conformity with the Labor Board's suggestion, a conference was held for the purpose of endeavoring to adjust the dispute, but without satisfactory results. In this communication the representative of the Railway Employees' Department objected to the action of the Labor Board in making the B. R. S. of A. a party to this dispute, for the reason, as claimed by him, that Mr. Hickey is a member of the I. B. of E. W., and was performing 50 per cent or more of his time on work specified in rules 140 and 141 of the shopmen's national agreement and of Addendum No. 6 to Decision No. 222.

An oral hearing was conducted in connection with the re-submission of this case and the three parties were duly notified and represented. The positions of the respective parties have been summarized as follows:

1. The representative of the I. B. of E. W. (Railway Employees' Department, A. F. of L.) takes the position that Mr. Hickey is employed by the New York Central at Calumet river interlocking plant as signal maintainer, being assigned to this job since October 22, 1918; that Mr. Hickey is working the second trick at Calumet river and since being there has refused three first-trick jobs that were open and given to younger men in seniority than he; that on March 22, 1920, the first trick at 71st street was vacant and Mr. Hickey made application for this job, but that he was ignored and the job given to an employee with less than one year's seniority rights; that the 71st street plant is the same kind of plant as Calumet river plant, and that the work assigned to Mr. Hickey is as follows:

"Inspecting, repairing and maintaining the electric wiring of General Railway Signal Company electric interlocking machine (model No. 2) operated with 120 volts and 64 levers; that in connection with the machine are 64 circuit controllers, 35 indicator selectors, 64 polarized

relays, and 1 master relay governing all switch circuits and 64 National Electric code enclosed fuse cutouts.

"The operation of 1 power switchboard equipped with 1 main switch, 4 circuit switches controlling 118-volt a.c. and d.c. signal lights, 4 battery charging switches, 1 circuit breaker, 1 volt-meter, 1 ammeter, 1 rheostat, and 1 end cell switch.

"The inspecting and maintaining of 8 motor operated derrails (1½ hp.), 8 motor operated bridge locks (1½ hp.), 12 signal motors (110-volt), and 22 signal motors (10-volt).

"The inspection and maintaining of all relays (4 to 6 points and 4 to 1,000 ohms), and bonding.

"The testing, locating and repairing of short and open circuits and grounds on all inside and outside wiring.

"The changing, inspecting, testing, connecting, disconnecting, repairing, and sometimes charging of all batteries (storage) used in connection with the plant."

The employees claim that Mr. Hickey's meter readings for the testing for leaks, opens, crosses, shorts, and grounds are the finest in practical use.

It is also contended by the I. B. of E. W. that Mr. Hickey is a member of their organization; that the first paragraph of the signalmen's agreement excluded employees who were assigned 50 per cent or more of their time in the performance of work recognized and classified as that of electrical workers as per rule 140 of the shopmen's national agreement, and therefore contend that inasmuch as practically all of Mr. Hickey's work is such as is generally recognized as electricians' work and outlined in rules 140 and 141 of the shopmen's national agreement as well as Addendum No. 6 to Decision No. 222 issued by the Labor Board, that he should be classified as an electrical worker.

It is further contended by the electrical workers' organization that their general chairman has authority which the railroad company should recognize in handling grievances for the employee in question, and that inasmuch as the first-trick maintainer at 71st street interlocking plant was vacant and filled by a younger employee in service, Mr. Hickey is entitled to the position.

2. The representatives of the B. R. S. of A. contend that Mr. Hickey does not perform any work specified in rules 140 and 141 of the shopmen's national agreement, in that the work that he performs is properly recognized as signal work; that an interlocking machine at an electrical plant is composed almost entirely of mechanical devices, there being only a small proportion of electrical devices connected therewith and those being of such a nature that they require very little attention except occasional inspection, and that on the other hand, the mechanical portion of the machine is of so intricate a nature that it requires daily inspection and repair, while the electrical part will often go for weeks at a time without any repairs being made or required.

The representative deals to considerable length with the question as work considered "mechanical work" and work considered "electrical," the purport of his argument being to show that signaling apparatuses consist of intricate mechanical parts, the adjustment, maintenance and repairs of which require the services of one experienced in that particular line, and that the actual electrical work in connection therewith represents a small proportion of the total services required. The signal organization claims that it has always been the practice for signalmen to perform this class of service.

In connection with the filling of the position at 71st street interlocking plant it is the contention of the signalmen's organization that the national agreement covering signalmen was properly applicable and followed by the management in filling this position.

Note—Voluminous exhibits and testimony were offered by both organizations herein referred to, but the Board in this decision will not attempt to go into detail as to the respective positions as to the technical arguments therein advanced, but will attempt only to give an outline of the controversy.

3. The carrier's position, briefly summarized, is that the position occupied by Mr. Hickey is that of signalman and that he is not performing service that entitles him to the classification and rating of a first-class electrical worker. In the carrier's presentation considerable stress is laid upon the mechanical construction of signaling apparatus as compared with the electrical features in connection with such equipment, they taking the position that the electrical workers are classifying as electrical work a large portion of the work which is strictly of a mechanical nature, having to do with the operation of the levers, et cetera, mechanically, and which parts do not transmit electric energy or are directly connected with such electric carrying parts.

Attention is called to the fact that mechanically-operated signal plants have been in use for years, being operated by man power, and that in a large number of cases the mechanism of the signal machine is identical to the mechanism operated by man power, the only change being that it is now

being operated by electric energy, but that the machine functions as heretofore.

It is contended that a large part of this particular man's time is devoted to repairs and maintenance of the mechanism, and that because some parts of the machine may be attached to electric carrying parts it should not properly make the repairs and maintenance of such parts electrical.

**Opinion**—The Labor Board carefully analyzed the exhibits and testimony submitted by the respective parties to this dispute, and upon first analyzation thought perhaps the question was one of jurisdiction and one that should be settled in conference between the interested organizations. However, upon further analysis, the board is of the opinion that the dispute involves a question which it is required to decide in view of the fact that a rule was in effect with reference to signalmen performing 50 per cent or more of their time on work classified as that of electrical workers. The question involved is this: "Is the work—claimed by the electrical workers—electrical work as contemplated in the national agreement and in rules 140 and 141 of the recent ruling of the Labor Board (Addendum No. 6 to Decision No. 222)?"

The signal department on the railroads of the country is an established branch of the railroad service; in most cases it is separate and distinct from any other department because of the peculiarities of the service. The positions of signalman and signal maintainers have been established and recognized for years, their service requirements being different from other classes of railroad employees. In Interpretation No. 2 to Supplement No. 4 issued by the United States Railroad Administration it was recognized that the service of these classes was of a composite nature, requiring the services of men having knowledge of the various mechanical requirements in connection with the maintenance and operation of such apparatus. These men in a large number of cases have grown up in the railroad service in that particular department and are especially fitted for service in that department. As stated by the carrier in its presentation, the operation of signal apparatuses by electric power is a comparatively new innovation, the previous practice being to use man power in the performance of this service.

The board recognized that where an employee must possess a thorough knowledge of electrical work and is required to perform actual electrical work for more than 50 per cent of his time, that he should, in accordance with the rules, be classified as an electrical worker. The board, however, does not feel that because the mechanism of a signal interlocking plant is controlled by levers or switchboards which have the effect of transmitting electric energy to this mechanism, that the repairs and maintenance of the mechanism or parts should be considered the work of electrical worker. This is strictly signal department service and would have been necessary had the practice of control by man power remained in effect.

The board will refrain from going into extensive detail as to the technical features brought out by the respective parties, but believes that it would be utterly unfair to the signalmen's organization as well as to the carrier to sustain the position of the electrical workers in this case. A decision as requested by the electrical workers would without a doubt disrupt the signalmen's organization as well as destroy established and well recognized practices that have grown up in railroad service for years. However, the board desires it understood that this decision is predicated upon the service performed by the employee involved in this particular dispute and in accordance with the rules in effect.

**Decision**—The Labor Board decides:

(a) No.

(b) The selection of representatives by the employee is a matter of his own choosing, but all grievances, et cetera, affecting said position must be handled in accordance with the rules and regulations applicable to signalmen.

(c) No.

By order of United States Railroad Labor Board.

BEN W. HOOPER, Chairman.

Attest: L. M. PARKER, Secretary.

#### Dissenting Opinion

In the dissenting opinion signed by A. O. Wharton and A. Phillips, members of the Labor Board, considerable argument was advanced tending to show that the board had rendered the decision with undue haste and not according to schedule. Minutes of the session of July 6

were repeated, emphasizing the desire of some of the members of the board that the board as a body inspect the interlocking plant before rendering the decision.

Mr. Wharton further stated that he wished to introduce for the record a copy of the correspondence between J. P. Noonan, International President of the I. B. of E. W. and W. W. Salmon, president of the General Railway Signal Company. Questions regarding education and training of employees, abstracted from Mr. Noonan's letter to Mr. Salmon are as follows:

The laws of our organization require that an apprentice shall serve four years as such before becoming a journeyman. It is, of course, necessary, in order that he become a competent mechanic, that he be required to learn a certain amount of mechanical work in addition to the electrical, so having in mind the proper education of our apprentices in this important phase of electrical work, we would appreciate having yourself or some member of your staff answer the following questions:

1. We believe that an apprentice should devote four hours per week to a course in elementary electricity. Do you consider that sufficient for the purpose?

2. What books or magazines would you recommend an apprentice to purchase and study in order to aid him to qualify as a journeyman in signal work?

3. In instructing an apprentice who devotes all of his time to signal work, how would you distribute his four-year course?

#### Electrical-Mechanical Drawing

4. On an electrical interlocking district, what proportion of a maintainer's time do you believe is spent on electrical work? On mechanical work?

5. Assuming an apprentice is going to devote all of his time to signal work, do you believe that a four-year term is too long to serve?

Secure in the belief that our desire to raise the standard of the men employed in this field meets with your approval, and is sufficient justification for our request, I remain,

Yours respectfully,

J. P. NOONAN,

International President, International Brotherhood of Electrical Workers.

In reply to Mr. Noonan's letter Mr. Salmon returned answers to these questions prepared by several officers of the General Railway Signal Company. Answer to question No. 2, furnished by W. K. Howe, chief engineer and remaining answers furnished by F. W. Moffet, assistant general manager, General Railway Signal Company.

Question 1—We believe that an apprentice should devote four hours per week to a course in elementary electricity. Do you consider that sufficient for the purpose?

Answer 1—It would be my thought that four hours per week, consistently and conscientiously applied, should give any man of average intelligence a fair knowledge of the elementary principles of electricity. I should be inclined to regard this as a minimum, however, but would not recommend that the minimum be placed any higher, as the apprentice should spend some time with other studies and reading.

Question 2—What books or magazines would you recommend an apprentice to purchase and study in order to aid him to qualify as a journeyman in signal work?

1. Book on "Railway Signaling," by E. E. King, published by the McGraw-Hill Book Co., 370 Seventh avenue, New York City. See December *Railway Signal Engineer*, page 459.

2. Book on "Electric Interlocking," by James Anderson, published by Simmons-Boardman Publishing Co., Woolworth Building, New York City. See description, page 24, *Railway Signal Engineer*, for March, 1922.

3. Periodical, *Railway Signal Engineer*.

4. Handbook on Electric Interlocking, G. R. S. Co.

5. Might take a course in International Correspondence School if it has a department devoted to railway signaling.

6. In addition there used to be a school on railway signaling at Utica, I believe, but do not know whether it is still in operation.

7. Man might become a member of the Signal section, A. R. A., and secure all publications, becoming familiar with plans, specifications, etc., in this way.

8. "Maintenance of Way, Cyclopedic," while a very large book has a good deal of information concerning railway signaling appliances.

By writing the Simmons-Boardman Publishing Co., Woolworth Building, New York, and the McGraw-Hill Company, 370 Seventh avenue, the individual in question could check up the list which I have given and probably obtain additional data as to books available.

Question 3—In instructing an apprentice who devotes all of his time to signal work, how would you distribute his four-year course?

Answer 3—Our suggestion would be that approximately fifty per cent of the study should be along electrical lines and the remainder fairly equally divided between elementary mechanics and mechanical drawing. The short electrical course of the International Correspondence Schools might well serve this purpose for such apprentices as do not have the opportunity to attend one of the night schools where such subjects are taught.

Question 4—On an electrical interlocking district what proportion of a maintainer's time do you believe is spent on electrical work? On mechanical work?

Answer 4—This again is a difficult question to answer, as we would first have to interpret what we mean by electrical work and mechanical work. If, in connection with an electric interlocking plant, we merely refer to the switch connections as mechanical then there is only a small amount of mechanical work to do; that is to say, a switch-box might be considered either a mechanical device or an electrical device. It is really a mechanical device to perform an electrical function. I venture the statement that a maintainer of an electric interlocking plant devotes two-thirds of his effort and ability to electrical work.

Question 5—Assuming an apprentice is going to devote all of his time to signal work, do you believe that a four-year term is too long to serve?

Answer 5—I feel sure that with the proper opportunity to learn, a man of ordinary intelligence should become a competent maintainer in four years. If he cannot it would seem advisable for him to look to some other pursuit as means of livelihood. The ordinary man who is at all mechanically inclined should become a competent maintainer in two or three years if he seriously applies himself to his work and makes a reasonable effort to acquire the necessary information.

#### Supporting Opinion

In the supporting opinion signed by two members of the Board, S. Higgins and R. M. Barton, it was stated that the case had been formally docketed in the usual manner according to schedule and that the statements made to the contrary in the dissenting opinion were inaccurate and misleading.

Continuing, the supporting opinion stated that in connection with the correspondence quoted in the dissenting opinion as to members of the Bureau inspecting the interlocking plant at Calumet river bridge, there was no understanding, implied or otherwise, that a decision covering this case, Docket No. 358, would be deferred until an inspection had been made.

#### Decision No. 1092

The United States Railroad Labor Board rendered Decision No. 1092 (Docket 1702) in July 6, 1922, concerning a case between the Railway Employee's Department, A. F. of L. (Federated Shop Craft) vs. the Atchison, Topeka & Santa Fe.

Question: Are Signal Maintainers O. B. Rusco and Charles Erthal entitled to classification, rates of pay and working conditions of the national shop agreement entered into between the United States Railroad Administration and employees represented by the Railway Employees' Department of the American Federation of Labor, dated September 20, 1919, in effect, subject to the provisions of Addendum No. 1 to Decision No. 119, issued by the United States Labor Board?

The Board decided that the claim of the employees is denied stating that the general questions involved in this case are identical to that of Decision No. 1091, given in detail previously in this article, in other words as signal maintainers their grievances, etc., must be handled in accordance with the regulations applicable to signalmen.