

Rules of the Railroad Commission of Indiana Concerning Inter- locking Devices.

The momentary nod of a drowsy engineman renders valueless the most expensive form of block signal, automatic, controlled or manual. The mistake of a sleepy operator nullifies the most carefully conceived system of train dispatching. The momentary forgetfulness of a weary conductor defies the laws of cause and effect. The nap of a wornout flagman marks the passage of human beings from time to "eternity."—*Railway Age*, March 23, 1906.

The following rules on the subject of interlocking devices supersede all other rules of the Commission on that subject and have been adopted, after a conference, held March 6, 1906, at Indianapolis, Ind., participated in by the Commission and George U. Bingham, its consulting engineer, and the following representatives of the railroads:

Mr. V. I. Smart, Signal Engineer, Chicago, Ill., representing Frisco Lines.

Mr. F. P. J. Patenall, Signal Engineer, Baltimore, Md., representing B. & O. System.

Mr. W. McC. Grafton, Signal Engineer, Pittsburg, Pa., representing Pennsylvania Lines.

Mr. G. H. MacDonough, Signal Engineer, Cincinnati, O., representing Big Four Lines.

Mr. A. S. Kent, Division Engineer, Chicago, Ill., representing Monon.

Mr. W. H. Willis, Signal Engineer, Passaic, N. J., representing the Erie.

Mr. Edward Gray, Signal Engineer, St. Louis, Mo., representing the Southern Railway.

Mr. E. T. Ambach, Signal Engineer, Cincinnati, O., representing the C., H. & D.

Mr. W. J. McWain, Signal Engineer, Detroit, Mich., representing Pere Marquette.

Mr. W. A. D. Short, Superintendent Signals, Lexington, Ky., representing Illinois Central.

Mr. Azel Ames, Jr., Signal Engineer, Cleveland, O., representing Lake Shore, Nickel Plate, L. E. & W. and C. & I. S.

Mr. E. A. Everitt, Signal Engineer, Detroit, Mich., representing Michigan Central.

Mr. H. J. Foale, Signal Engineer, Decatur, Ill., representing the Wabash.

Mr. A. Montzheimer, Chief Engineer, Joliet, Ill., representing E., J. & E. and C., L. S. & E.

Mr. A. Shane, Signal Engineer, Frankfort, Ind., representing Clover Leaf.

Mr. T. T. Irving, Res. Engineer, Detroit, Mich., representing Grand Trunk.

LAWS CONCERNING INTERLOCKING.

(Acts 1883, p. 55. In force March 2, 1883.)

By Agreement.

Section 1. When, and in any case, two or more railroads crossing each other at a common grade shall, by a system of interlocking or automatic signals, or by any works or fixtures to be erected by them, render it safe for engines and trains to pass over such crossing without stopping, and such works and fixtures shall first be approved by the Auditor of State, and the plan of said works and fixtures for such crossing, designating the place of crossing, shall have been filed with the Auditor of State, then, and in that case, it is hereby made lawful for the engines and trains of such railroad or railroads to pass over said crossing without stopping, any law, or the provisions of any law, now in force to the contrary notwithstanding. And all such other provisions and laws contrary hereto are hereby declared not to be applicable in such cases: Provided, however, That if the Auditor of State shall disapprove such plans, or fail to approve the same within twenty days after the filing thereof, the railroad company or companies interested or applying for such privilege may appeal therefrom, and apply to the Circuit Court of the county wherein such crossing is located, or the judge thereof in vacation, and the auditor shall certify his proceedings and transmit the same, together with all the papers

therein, to such court, and such court, or judge in vacation shall take jurisdiction thereof, and proceed to hear and determine the same: Provided, further, That when the appliances, or the electric system provided for in this act, shall be adopted by any railroad or railway company, such appliances or system shall not be used or put in at any railroad crossing in this State, to the detriment of any other railroad or railway company, unless such other company, by its proper officers, consent thereto in writing.

Engineer.

Sec. 2. The Auditor of State, or in case of appeal, the court or judge, if either deem it advisable, may appoint a competent civil engineer to examine such proposed plan and report the result of such examination for the information of such auditor, court or judge.

Fees Allowed.

Sec. 3. The Auditor shall be allowed for his services ten dollars for every day in which he shall be engaged in such duty, and the engineer shall be allowed such reasonable sum as the Auditor, court or judge shall award, and all costs and expenses shall be paid by the railroad company or companies in interest, which shall be taxed, paid or collected as in other cases.

(Acts 1897, p. 237. In force March 8, 1897.)

By Agreement.

Sec. 2. That when in case two or more railroads or a railroad and an electric road crossing each other at a common grade, or any railroad crossing a stream by any swing or draw-bridge, shall, by a system of interlocking, or by other works or fixtures to be erected by them or either of them render it safe for engines or trains to pass over such crossing or bridge without stopping, and such system of interlocking works or fixtures shall first be approved by the Auditor of State, and the plan of such interlocking works or fixtures for such crossing or bridge designating the plan of crossing shall have been filed with such Auditor, then and in that case it is hereby made lawful for the engines and trains of such railroad or railroads to pass over such crossing or bridges without stopping, any law or the provisions of any law now in force to the contrary notwithstanding: Provided, That the said

Auditor shall have and is hereby given power in case such interlocking system or other fixtures shall in his judgment prove to be unsafe or impracticable, to order the same discontinued, opportunity first being given to the person or company operating the same to be heard before said Auditor as to the propriety of such order. In case such order is made and enforced, the existing statutes relative to stopping at crossings shall apply until such time as a device approved by said Auditor is substituted.

By Petition.

Sec. 3. That in case where the tracks of two or more railroads, or the tracks of a railroad and an electric railroad cross each other at common grade in this State, any company owning any one of such tracks, whose managers may desire to unite with others, in protecting such crossing with interlocking or other safety devices, and shall be unable to agree with such others on the matter, may file with the said Auditor a petition stating the facts of the situation, and asking said Auditor to order such crossing to be protected by interlocking, or other safety devices; said petition shall be accompanied by a plan showing the location of all tracks and switches, and upon the filing thereof, notice shall be given to each company or persons owning or operating any track involved in such crossing, and the said Auditor thereupon view the site of such crossing, and shall, as soon as practicable, appoint a time and place for the hearing of such petition, at the time and place named for hearing, unless the hearing is for good cause continued, said Auditor shall proceed to try the question of whether or not the crossing shall be protected by interlocking or other safety devices, and shall give all companies and parties interested an opportunity to be fully heard; and after such hearing said Auditor shall enter an order upon a record book or docket, to be kept for that purpose, granting or denying such petition; and in case the same is granted, such order shall prescribe the interlocking or other safety devices for such crossing and all other matters which may be deemed proper to the efficient protection of such crossing, and in such order the Auditor shall designate the proportion of the cost of the construction of such plant, and the expense of maintaining and operating the same, which each of the companies or persons

concerned shall pay, and shall also fix the time within which such appliance shall be put in, such time, however, not to exceed ninety days from the making of such order.

Junior Road Builds.

Sec. 4. In case, however, one railroad company or an electric railroad company shall hereafter cross at grade with its track or tracks, the track or tracks of another railroad, the railroad company or the electric railroad company seeking to cross at grade shall be compelled to interlock such crossing to the satisfaction of the said Auditor, and to pay all cost of such appliance, together with the expense of putting them in and the future maintenance and operation thereof: Provided, This act shall not apply to crossings of sidetracks only.

Running Locked Crossings.

Sec. 5. Whenever interlocking or other safety devices are constructed and maintained in compliance with Sections 3 and 4 of this act, then and in that case it shall be lawful for the engines and trains of such railroad or railroads, and the cars of such electric railroad to pass over such crossing without stopping, any law or provisions of any law, now in force to the contrary notwithstanding; and all such other provisions of law contrary thereto are hereby declared not to be applicable in such case.

Penalty.

Sec. 6. Any person, company or corporation refusing or neglecting to comply with any order made by said Auditor in pursuance of this act, shall forfeit and pay a penalty of five hundred dollars per week for each week of such refusal and neglect, the same to be recovered in an action of debt in the name of the State of Indiana, and to be paid when collected into the county treasury of any county in which such suit may be tried.

Engineer.

Sec. 7. That the Auditor of State, if he deems it advisable, may appoint a competent civil engineer to examine such proposed plan, and report the result of such examination for the information of said Auditor.

Fees.

Sec. 8. That the Auditor shall be allowed for his services ten dollars for every day in which he shall be engaged in such duty, and the engineer shall be allowed such reasonable sum as the Auditor shall award.

Interurbans.

The Act of March 3, 1903, Acts 1903, p. 125, provides special proceedings whereby a street or interurban railroad may acquire crossing rights over another railroad, and provides in Section 1 of the act as follows: "At every crossing of the main track of a railroad company constructed under the special proceedings, aforesaid, the company desiring to cross shall, within six months after it commences to use such crossing, at its own expense, construct and likewise, at its own expense, maintain and operate a system of full interlocking works, with a derailing apparatus in the tracks of each company, of such design and character as will be best calculated to prevent collisions at such crossing, and will meet with the approval of the Auditor of State, and such proceeding shall be had and such notice shall be given in securing the approval of such interlocking works by the Auditor as the law governing the protection by interlocking devices of the crossings of two railroads may provide. The Auditor of State shall be allowed for his services in examining and approving or disapproving such interlocking works ten dollars per day, and he may, if he deem it advisable, employ a competent engineer to assist him, which engineer shall also be allowed a reasonable sum for his services, and the amounts due said Auditor and said engineer for such services shall be paid upon demand by the company desiring said crossing. The word "railroad," as used in this act, shall be construed to include belt railroads as well as other railroads.

Penalty.

Sec. 2. If any street railroad company shall fail or refuse to construct, maintain and operate a system of full interlocking works in the manner, at the time and upon the terms stated in the preceding section, it shall forthwith cease to use the crossing required to be protected by such interlocking works, and the com-

pany whose railroad is crossed by such street railroad company may forthwith remove such crossing, and said street railroad company shall thereafter have no right to renew and use said crossing until it shall have constructed and put in operation the interlocking works required by the preceding section.

EXTRACTS FROM THE LAW CREATING THE COMMISSION.

(Acts 1905, p. 83. In force April 15, 1905.)

Powers.

Sec. 3. The power and authority is hereby vested in the Railroad Commission of Indiana, and it is hereby made its duty, as hereinafter provided, to supervise all railroad freight and passenger tariffs, and to adopt all necessary regulations to govern car service and the transfer and switching of cars from one railroad to another at junction points or where entering the same city or town, and to supervise charges therefor; to require and supervise the location and construction of sidings and connections between railroads; to supervise the crossing of the tracks and sidetracks of railroads by other railroads now in process of construction or extension, or which may be hereafter constructed or extended, and to prescribe the terms and conditions and manner in which such crossings shall be made; and the character thereof, whether at grade or over or under grade, and the authority now vested in the Auditor of State under the laws of this State with reference to the crossing of railroads by other railroads, or by railroads operated by electricity, and the installation and maintenance of interlocking appliances at such crossings is hereby vested in the Commission. * * *

Rules.

Sec. 4, Par. (a). The Commission shall have power to adopt rules to govern its proceedings and to regulate the mode and manner of all investigations and hearings of railroad companies and other parties before it, in the consideration of rates, orders, charges and other acts required of it under this law: Provided, That all persons interested in the result of any such investigation or hearing shall have the right to be present.

Duties.

Sec. 20. It is hereby made the duty of such Railroad Commission to see that the provisions of this act and all laws of this State concerning railroads are enforced and obeyed, and that violations thereof are promptly prosecuted, and penalties due the State therefor recovered and collected. And said Commission shall report all said violations, with the facts in their possession, to the Attorney-General or other officer charged with the enforcement of the laws and request him to institute the proper proceeding; and all suits between the State or the Commission and any railroad or express company shall be placed immediately upon the trial calendar of the courts wherein the same are pending, and shall have precedence over all other civil causes pending in such courts, to the end that there may be speedy trials and adjudications thereof.

(a) It shall be the duty of the Commission to investigate all complaints against the railroad company subject hereto, and to enforce all laws of this State in reference to railroads.

Application.

Sec. 21 (a) The provisions of this act shall be construed to apply to, and affect only the transportation of passengers, freight, express matters and cars between points within this State; and this act shall also apply to express companies: Provided, That this act shall not apply to street or interurban railroads, except as section three (3) substitutes the Railroad Commission, created hereby, for the Auditor of State, in respect to duties pertaining to the construction and maintenance of interlocking works at crossings of railroads and railroads operated by electricity.

LAWS CONCERNING RAILROADS CROSSING.

(Acts 1852, p. 409. In force May 6, 1853.)

Powers.

Sec. 13. Every such corporation shall possess the general powers, and be subject to the liabilities and restrictions expressed in the special powers following:

Crossings.

Sixth—To cross, intersect, join, and unite its railroad with any other railroad before constructed, at any point on its route and

upon the grounds of such other railroad company, with the necessary turnouts, sidings, switches, and other conveniences, in furtherance of the objects of its connections; and every company whose railroad is or shall be hereafter intersected by any new railroad shall unite with the owners of such new railroad in forming such intersections and connections, and grant the facilities aforesaid; and if the two corporations can not agree upon the amount of compensation to be made therefor, or the points or manner of such crossings and connections, the same shall be ascertained and determined by commissioners to be appointed as is provided hereinafter in respect to the taking of lands; but this section is not to affect the rights or franchises heretofore granted.

(Acts 1873, p. 186. In force March 7, 1873.)

Crossing Railroad Track.

Sec. 1. Where it becomes necessary for the track of one railroad company to cross the track of another railroad company, the company owning the road last constructed at such crossing shall, unless otherwise agreed to between such companies, be at the exclusive expense of constructing such crossing in a manner to be convenient and safe for both companies.

Repairs of Crossings.

Sec. 2. Whenever such railroad crossing is constructed in the manner provided for in the preceding section, it shall be the duty of each company, respectively, to maintain and keep in repair its own track, so as at all times to provide a ready, safe and convenient crossing for all locomotives or trains passing on either road at such point.

(Acts 1897, p. 237. In force March 8, 1897.)

Railroads Crossing Each Other.

Sec. 1. That where it becomes necessary for the track of one railroad company to cross the track of another railroad company, unless the manner of making such crossings shall be agreed to between such companies, it shall be the duty of the Circuit Court of the county wherein such crossing is located, or the judge thereof in vacation, to ascertain and define by its decree the mode of such crossing which will inflict the least practicable injury upon the

rights of the company owning the road which is intended to be crossed; and if in the judgment of such court it is reasonable and practicable to avoid a grade crossing, it shall by its process prevent a crossing at grade.

LAWS REGULATING OPERATION OF TRAINS OVER UNPROTECTED CROSSINGS.—PUBLIC OFFENSES.

(Acts 1905, p. 747. In force April 15, 1905.)

Stop at Crossing.

Sec. 668. Whoever, being the engineer of any locomotive or the motorman of any interurban electric car running upon any railroad track, upon or over which passengers are or may be transported, runs such locomotive or interurban electric car across or upon the track of any other railroad or interurban railroad at a place where no system of interlocking works or fixtures is maintained as provided by the laws of this State, without first coming to a full stop before entering upon or crossing such other track, and without first ascertaining that there is no other train, locomotive or car in sight, approaching and about to pass over such other track; or whoever, being such engineer or motorman, runs such locomotive or interurban electric car upon or across such track when a locomotive or car is in sight, approaching and about to pass upon and over such crossing on such other track, shall, on conviction, be fined not less than one hundred dollars nor more than one thousand dollars, and be imprisoned in the county jail not less than three months nor more than one year; and if any person shall be injured or be killed by reason of such crossing, such engineer or motorman so violating the provision of this section shall be imprisoned in the State prison not less than two years or more than fourteen years.

Deceiving Engineer.

Sec. 699. Whoever shall falsely report to the engineer of any locomotive or motorman of any interurban or electric car running upon any railroad track, upon and over which passengers are or may be transported, that there is no train or locomotive upon the track of any other railroad or interurban railroad, in sight, and approaching the place where such roads cross, or upon such cross-

ing, or whoever, being the conductor of any train or interurban or electric car, orders and directs the engineer or motorman to violate the provisions of the preceding section; or whoever, being a brakeman of any train of cars, by reason of his gross carelessness or wilful neglect of duty, causes such train or locomotive or such interurban or electric car to run across or upon such crossing, shall, on conviction, be fined not less than one hundred dollars nor more than one thousand dollars, and imprisoned in the county jail not less than three months nor more than one year; and if any person shall be injured or killed by reason of the violation of any of the provisions of this section, the person so violating such provision or provisions shall, on conviction, be imprisoned in the State prison not less than two years nor more than fourteen years.

Running on Crossing.

Sec. 670. Whoever, being an engineer or motorman, permits his locomotive or interurban or electric car to run upon or across the track of any other railroad or interurban railroad at a crossing not provided with a system of interlocking works or fixtures, before the locomotive or train coming upon the other track shall have passed over such crossing, if the locomotive or train on the other track shall arrive at the crossing first, shall, on conviction, be fined not less than one hundred dollars, nor more than one thousand dollars, and imprisoned in the county jail not less than three months nor more than one year; and if any person be killed or injured by reason of the violation of any provision of this section, the person so violating such provision shall, on conviction, be imprisoned in the State prison not less than two years nor more than fourteen years.

RULES.

In the administration of the foregoing laws of the State of Indiana, the Railroad Commission of Indiana adopts as the settled policy of the Commission, hereby giving notice to all concerned that whenever it is practicable and special conditions are not shown requiring an exception, a railroad crossing another railroad in this State shall cross under or above said railroad and not at grade, and the Railroad Commission of Indiana will observe the following rules concerning interlocking devices, which are now

promulgated, for the information and guidance of all interested parties, adopted August 24, 1906, to become effective September 20, 1906:

Rule No. 1. When plans are presented for a crossing which is to be interlocked by agreement between the connecting roads, the road presenting the plans must furnish the Commission with the approval of the interest connecting lines indorsed upon the plans, or a letter from the proper officer thereof approving the plans presented.

Rule No. 2. When a petition is filed with the Commission pursuant to Section 3 of the Acts of 1897, there shall be filed with the same as many copies as there are roads interested in the crossing. Such petition and accompanying maps shall comply with such section, and in addition thereto embrace the following:

(a) Copies of all contracts or agreements existing between the connecting roads concerning the crossing.

(b) An estimate of the probable cost of constructing a manual interlocking device at the crossing.

(c) An estimate of the probable cost of constructing a power interlocking device at the crossing.

(d) An estimate of the probable cost of annual maintenance and operation for each character of device.

(e) A statement of the number of levers necessary to properly control the crossing, and the functions properly chargeable to each road.

(f) A statement of the daily train movement over such crossing by each company.

Rule No. 3. Petitions filed pursuant to Rule No. 2 will be heard at the site of the crossing, or at such other place as the Commission may determine after notice to the parties. The roads against which the petition is presented at the time of the hearing may file an answer admitting or denying the statement in the petition and may file a counter statement concerning the matters required by "a to f" inclusive of Rule 2.

Rule No. 4. If a crossing is ordered interlocked upon petition, and the interested roads fail, for thirty days after the Commission's order, to agree as to the manner of complying with the Commission's order and to proceed with the work, then the Commis-

sion, after notice to the roads and a hearing, will assign the construction, maintenance and operation of the device to one of the roads, and authorize it to collect compensation from the other roads, in accordance with the order of the Commission.

Rule No. 5. All plans to protect crossings, presented by agreement of the roads, or to comply with the Commission's order upon petition, must be drawn to a scale of not less than fifty feet to one inch, and be filed in duplicate and contain the following:

(a) Map of the territory, showing all the tracks, curves, sidings, switches, cross-over tracks and connecting tracks between roads, also all buildings, trees and other obstructions to view. Also the proposed location of the interlocking tower.

(b) All grades upon all roads shall be plainly marked on either side of the crossing. The location of all bridges between the derail and crossing shall be shown. The elevation or depression of all tracks above or below the contiguous territory shall be shown.

(c) A complete showing of the ground plan of the proposed device in all its parts, and especially the location of derails and home and distant signals. Tower construction and interior plan will be passed upon only after completion.

Rule No. 6. In all devices hereafter constructed or rebuilt the derails in main track shall be located not less than five hundred feet in advance of the crossing or fouling point which it is intended to protect unless the Commission shall determine, after investigation, that local conditions warrant a different location, in which event the Commission shall fix the location of derail.

(a) If such local conditions exist requiring the derail to be nearer the crossing than required by this rule, a detailed, written statement of such local conditions shall be filed with the plan and submitted to the Commission for its consideration.

Rule No. 7. If, in the judgment of the Commission, the use of guard rails is warranted, guard rails of such length as the Commission may determine will be approved in plans and plants having derails five hundred feet or more from the crossing or fouling point. In all other cases guard rails will not be approved or allowed, except under special conditions, to be shown by plans, and detailed, written statement accompanying plans for submission to

the Commission. The Commission reserving authority to make exceptions to this rule when the special conditions demand it, or to order the use of guard rails upon its own motion.

(a) The use of guard rails, contrary to this rule, in plants now in operation is condemned, and the different roads are requested to remove the same by March 1, 1907, unless within that time they shall make to the Commission a showing of special conditions necessitating their use, and procure the authority of the Commission for their continuance.

Rule No. 8. The Commission will not inspect complete plants until the applicant files with the Commission:

(a) Complete layout of plant, as required by Rule No. 5, having all points of control duly numbered to correspond with the number of the lever used in its control.

(b) Complete locking sheet showing the exact manner in which the plant is installed.

(c) Complete manipulation sheet, showing manner of operation in setting up each route governed by the plant.

(d) Copy of the rules issued by the applicant, for the government of employes having charge of interlocking devices.

Rule No. 9. Completed plant must be connected up ready for service before inspection is requested, with instructions that all trains come to a full stop at home signal.