

TRAIN RULES
AS ADOPTED BY THE
SOUTHERN PACIFIC CO.,
ATLANTIC SYSTEM.
APRIL 1st, 1890

919

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THE STANDARD CODE

OF

TRAIN RULES

AS ADOPTED BY THE

Southern Pacific Company--Atlantic System,
Louisiana Western Ext. Railroad Company,
Galveston, Harrisburg and San Antonio R'y,
Texas and New Orleans Railroad,
Sabine and East Texas Railway,
New York, Texas and Mexican R'y,
Gulf, Western Texas and Pacific R'y,

APRIL 1st, 1890.

A. W. HYATT,
STATIONER AND PRINTER,
73 CAMP ST., N. O.—90.

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GENERAL NOTICE.

It is of the utmost importance that proper rules for the government of the employees of a railroad company should be literally and absolutely enforced, in order to make such rules efficient. If they cannot or ought not to be enforced, they ought not to exist. Officers or employees whose duty it may be to make or enforce rules, however temporary or unimportant they may seem, should keep this clearly in mind. If in the judgment of any one whose duty it is to enforce a rule, such rule cannot or ought not to be enforced, he should at once bring it to the attention of those in authority.

All employees should be required to be polite and considerate in their intercourse with the public. The reputation and prosperity of a company depend greatly upon the promptness with which its business is conducted and the manner in which its patrons are treated by its employees.

GENERAL RULES.

1. The rules herein set forth apply to and govern the following roads: Southern Pacific Company—Atlantic System; Louisiana Western Extension Railroad Company; Texas and New Orleans Railroad Company; Sabine and East Texas Railway Company; Galveston, Harrisburg and San Antonio Railway Company; New York, Texas and Mexican Railway Company; and Gulf, Western Texas and Pacific Railway Company. They shall supersede all prior rules and instructions, in whatsoever form issued, which are inconsistent therewith.

2. In addition to these rules, the Time-tables will contain special instructions, as the same may be found necessary. Special instructions, whether in conflict with these rules or not, which may be given by proper authority, whether upon the Time-tables or otherwise, shall be fully observed while in force.

3. The head of each department must be conversant with the rules, supply copies of them to his subordinates, see that they are understood, enforce obedience to them, and report to the proper officer all violations and the action taken thereon.

4. Every employee whose duties are in any way prescribed by these rules must always have a copy of them at hand when on duty, and must be conversant with every rule. He must render all the assistance in his power in carrying them out, and immediately report any infringement of them to the head of his department.

5. The fact that any person enters, or remains in, the service of the company will be considered as an assurance of willingness to obey its rules. No one will be excused for the violation of any of them, even

though not included in those applicable to his department.

6. If in doubt as to the meaning of any rule or special instructions, application must be made at once, to the proper authority, for an explanation. Ignorance is no excuse for neglect of duty.

7. All employees will be regarded as in the line of promotion, advancement depending upon the faithful discharge of duty, and capacity for increased responsibility.

9. Every employee, while on duty connected with the trains on any division of the road, is under the authority, and must conform to the orders, of the superintendent of that division.

10. Employees must wear the prescribed badges or uniforms while on duty.

11. Mail agents, express messengers, parlor and sleeping car conductors and porters, news agents, and persons in charge of individual cars are subject, while on duty, to the rules governing employees of the company.

STANDARD TIME.

12. Observatory Standard Time is the only recognized standard, and will be transmitted from the Naval Observatory, Washington, D. C., to the designated offices.

13. The standard time will be telegraphed to all points from the designated offices at 11.00 A. M., central time, daily.

14. Certain clocks will be designated on each division as Standard Clocks.

15. Where station clocks are provided, station agents must see that they show correct time; but trainmen and enginemen must not take time from such clocks unless they are also designated as Standard Clocks.

16. Each conductor and engineman must have a reliable watch which has been examined and certified to on the prescribed form, by a responsible watchmaker, and must file such certificate with the proper designated officer before he is allowed to take charge of a train or engine. Watches must be examined and certificates renewed every six months.

17. Each conductor and engineman must regulate his watch by the designated Standard Clock before starting on each trip, and register his name and the time at which he regulated his watch on a blank form (or in a book) provided for that purpose.

18. Conductors and enginemen whose duties prevent them from having access to a Standard Clock must compare daily with, and regulate their watches by, those of conductors and enginemen who have Standard Time, and have registered their names as above provided.

TIME-TABLES.

19. A Time-table is the general law governing the arriving and leaving time of all regular trains at all stations. Time-tables will be issued from time to time, as may be necessary. The times given for each train on the Time-table is the Schedule of such train.

20. Each Time-table, from the moment it takes effect, supersedes the preceding Time-table, and all special instructions relating thereto; and trains shall be run as directed thereby, subject to the rules. All regular

trains on the road running according to the preceding Time-table shall, **unless otherwise directed**, assume the times and rights of trains of corresponding numbers on the new Time-table.

21. Upon the Time-table not more than two sets of figures are shown for a train at any point. When two times are shown, the earlier is the arriving time and the later the leaving time. When one time is shown it is the leaving time unless otherwise indicated.

Regular meeting or passing points are indicated on the Time-table by figures in **full-faced type**.

Both the arriving and leaving time of a train are in **full-faced type** when both are meeting or passing times, or when one or more other trains are to meet or pass it between those times.

In all cases trains are required to clear and follow as per Rules 85 to 90 inclusive.

22. On the employee's Time-table the words "daily" "daily, except Sunday," etc., printed at the head and foot in connection with a train, indicate how it shall be run. The figures given at intermediate stations shall not be taken as indicating that a train will stop unless the rules require it. The following signs placed before the figures indicate:

"s"—regular stop.

"f"—stop on signal to receive or discharge passengers or freight.

"M"—stop for meals.

Trains are designated by numbers and their class indicated on the Time-tables.

SIGNAL RULES.

SIGNALS.

23. Conductors, enginemen, firemen, brakemen, station agents, telegraph operators, switchmen, switch-tenders, track foremen, road and bridge watchmen, and all other employees whose duties may require them to give signals must provide themselves with the proper appliances, and keep them in good order and always ready for immediate use.

24. Flags of the proper color must be used by day, and lamps of the proper color by night or whenever from fog or other cause the day signals cannot be clearly seen.

25. Red signifies **danger**, and is a signal to stop.

26. Green signifies **caution**, and is a signal to go slowly.

27. White signifies **safety**, and is a signal to go on.

29. Blue is a signal to be used by car inspectors.

30. An explosive cap or torpedo, placed on the top of the rail, is a signal to be used **in addition** to the regular signals.

The explosion of **one** torpedo is a signal to **stop** immediately; the explosion of **two** torpedoes is a signal to **reduce speed** immediately, and look out for a danger signal.

31. A fusee is an **extra** danger signal, to be lighted and placed on the track at night, in cases of accident or emergency.

A train finding a fusee burning upon the track must come to a stop, and not proceed until it is burned out.

32. A flag or lamp swung across the track, a hat or any object waved violently by any person on the track, signifies danger, and is a signal to stop.

TRAIN SIGNALS.

33. Each train, while running, must display two red flags by day and two red lights by night, one on each side of the rear of the train, as Markers, to indicate the rear of the train. Yard engines will not display Markers.

34. Each train running after sunset, or when obscured by fog or other cause, must display the head-light in front, and two or more red lights in the rear. Yard engines must display two green lights instead of red, except when provided with a head-light on both front and rear.

35. Each car on a passenger train while running must be in communication with the engine. In the absence of an equivalent appliance, a bell-cord must be attached to the signal-bell of the engine, passing through or over the entire length of the train, and secured to the rear end of it.

36. Two green flags by day and two green lights by night, displayed in the places provided for that purpose on the front of an engine, denote that the train is followed by another train, running on the same Schedule and entitled to the same Time-table rights as the train carrying the signals.

37. Two white flags by day and two white lights by night, displayed in the places provided for that purpose on the front of an engine, denote that the train is an extra. These signals must be displayed by all extra trains, but not by yard engines.

38. A blue flag by day and a blue light by night, placed on the end of a car, denote that car inspectors are at work under or about the car or train. The car or train thus protected must not be coupled to, or moved, until the blue signal is removed by the car inspectors.

When a car or train standing on a siding is protected by a blue signal, other cars must not be placed in front of it so that the blue signal will be obscured, without first notifying the car inspector, that he may protect himself.

WHISTLE SIGNALS.

39. One **long** blast of the whistle is the signal for approaching stations, railroad crossings and junctions (thus, ———).

40. One **short** blast of the whistle is the signal to apply the brakes—stop (thus, -).

41. Two **long** blasts of the whistle is the signal to throw off the brakes (thus, — — —).

42. Two **short** blasts of the whistle is an answer to any signal, except "train parted" (thus, --).

43. Three **long** blasts of the whistle (to be repeated until answered as provided in Rule No. 62) is a signal that the train has parted (thus, — — —).

44. Three **short** blasts of the whistle, when the train is **standing** (to be repeated until answered, as provided in Rule No. 61), is a signal that the train will back (thus, ---).

45. Four **long** blasts of the whistle is the signal to call in the flagman (thus, ——— ——— ———).

46. Four **short** blasts of the whistle is the engine-man's call for signals from switch-tenders, watchmen, trainmen and others (thus, ----).

47. Five **short** blasts of the whistle is a signal to the flagman to go back and protect the rear of the train (thus, -----).

48. One **long** followed by two **short** blasts of the whistle is a signal to be given by trains when displaying signals for a following train, to call the attention

of trains of the same or inferior class to the signals displayed (thus, — — —).

49. Two **long** followed by two **short** blasts of the whistle is the signal for approaching road crossings at grade (thus, — — — — —).

50. A succession of **short** blasts of the whistle is an alarm for persons or cattle on the track, and calls the attention of trainmen to danger ahead.

BELL-CORD SIGNALS.

51. One tap of the signal-bell, when the train is **standing**, is the signal to start.

52. Two taps of the signal-bell, when the train is **running**, is the signal to stop at once.

53. Two taps of the signal-bell, when the train is **standing**, is the signal to call in the flagman.

54. Three taps of the signal-bell, when the train is **running**, is the signal to stop at the next station.

55. Three taps of the signal-bell, when the train is **standing**, is the signal to back the train.

56. Four taps of the signal-bell, when the train is **running**, is the signal to reduce speed.

57. When one tap of the signal-bell is heard while a train is **running**, the engineman must immediately ascertain if the train is parted, and, if so, be governed by Rule No. 103.

58. Signals of the same number of sounds shall have the same significance when given by other appliances than bell-cords and signal-bells.

LAMP SIGNALS.

59. A lamp swung across the track is the signal to stop.

60. A lamp raised and lowered vertically is the signal to move ahead.

61. A lamp swung vertically in a circle across the track, when the train is **standing**, is the signal to move back.

62. A lamp swung vertically in a circle at arm's length across the track, when the train is **running**, is the signal that the train has parted.

63. A flag, or the hand, moved in any of the directions given above, will indicate the same signal as given by a lamp.

FIXED SIGNALS.

64. Fixed signals are placed at junctions, railroad crossings, stations and other points that require special protection. Special instructions will be issued indicating their position and use.

RULES GOVERNING THE USE OF SIGNALS.

65. A signal imperfectly displayed, or the absence of a signal at a place where a signal is usually shown, must be regarded as a danger signal, and the fact reported to the Superintendent.

66. The unnecessary use of the whistle is prohibited; when necessary in shifting at stations and in yards the engine-bell should be rung, and the whistle used only when required by rule or law, or when necessary to prevent accident.

67. The whistle must not be sounded while passing a passenger train, except in cases of emergency or danger, or when required by the rules.

68. When a danger signal (except a fixed signal) is displayed to stop a train, it must be acknowledged as provided in Rule No. 42.

69. The engine-bell must be rung before starting a train, and when running through tunnels and the streets of towns or cities.

70. The engine-bell must be rung for a quarter of a mile before reaching every road crossing at grade, and until it is passed; and the whistle must be sounded at all whistling-posts.

71. When two or more engines are coupled to the head of a train, the leading engine only shall display the signals as provided in Rules Nos. 36 and 37.

72. One flag or light displayed as a classification signal will be regarded the same as if two were displayed; but conductors and enginemen will be held responsible for the proper display of all train signals.

73. When a train is being pushed by an engine (except when shifting and making up trains in yards) a white light must be displayed on the front of the leading car at night, or when the train is obscured by fog or other cause.

74. When a train turns out to meet or pass another train the red lights must be removed and green displayed as soon as the track is clear; but the red must again be displayed before returning to main track.

Head-lights on engines, when on side tracks waiting for trains, must be covered as soon as the track is clear and the train has stopped.

76. White signals must be used by watchmen at public road and street crossings to prevent persons and teams from crossing when trains are approaching. Danger signals must be used only when necessary to stop trains.

77. Torpedoes must not be placed near stations or road crossings, where persons are liable to be injured by them.

78. All signals must be used strictly in accordance with the rules, and trainmen and enginemen must keep a constant lookout for signals.

TRAIN RULES.

CLASSIFICATION OF TRAINS.

79. All trains are designated as regular or extra. Regular trains are those represented on the Time-table, and may consist of one or more sections. All sections of a train, except the last, must display signals as provided in Rule No. 36. Extra trains are those not represented on the Time-table. An engine without cars, in service on the road, shall be considered a train.

80. All regular trains are classified on the Time-table with regard to their priority of right to the track; trains of the first-class being superior to those of the second and all succeeding classes, and trains of the second-class being superior to those of the third and all succeeding classes; and so on indefinitely. The terms passenger, freight or mixed are descriptive and do not refer to class.

81. Extra trains may be distinguished as:

- Passenger Special;
- Extra;
- Work Extra.

82. All extra trains are of inferior class to all regular trains of whatever class.

MOVEMENT OF TRAINS.

83. A train of inferior class must in all cases keep out of the way of a train of superior class.

84. East bound trains have the absolute right of track over trains of the same class running in the opposite direction.

NOTE—Trains proceeding towards New Orleans will be called East Bound; trains proceeding away from New Orleans will be called West Bound.

85. When trains of the same class meet, the train not having right of track must take the siding and be clear of the main track before the leaving time of the opposing train; but such train must not pass the switch to back in on a siding, until after the arrival of the opposing train, unless otherwise directed by special instructions. When necessary to back in on the siding, before passing the switch, a flagman must be sent out in the direction of the opposing train as per Rule No. 99.

86. When a train of inferior class meets a train of superior class, the train of inferior class must take the siding and clear the train of superior class **five** minutes. A train of inferior class must keep **five** minutes off the time of a train of superior class following it.

87. A train must not leave a station to follow a passenger train until **ten** minutes after the departure of such passenger train. (See Rule 334).

88. Passenger trains running in the same direction must keep not less than **ten** minutes apart. (See Rule 334).

89. Freight trains following each other must keep not less than **ten** minutes apart (except in closing up at stations or at meeting and passing points). (See Rule 334.)

90. No train must leave a station expecting to meet or to be passed at the next station by a train having the right of track, unless it has full schedule time to make the meeting or passing point, or unless it has the full time allowed between stations (which may be shown on the margin of the Time-table) to make the

meeting or passing point, and clear the track by the times required by Rules Nos. 85 and 86.

91. A train not having right of track must be entirely clear of the main track by the time it is required by rule to clear an opposing train or a train running in the same direction; failing to do so, it must be immediately protected, as provided in Rule No. 99.

92. Except at meeting or passing points, as provided in Rules Nos. 85 to 91, inclusive, no train must arrive at a station in advance of its schedule arriving time, when shown.

No train must leave a station in advance of its schedule leaving time.

93. All trains must **stop** at schedule meeting or passing points, if the train to be met or passed is of the same class, unless the switches are plainly seen to be right, and the track clear. The point at which a train should **stop** is the switch used by the train to be met or passed in going on the siding.

When the expected train of the same class is not found at the schedule meeting or passing point, the train having right of track must approach all sidings prepared to stop, until the expected train is met or passed.

94. All trains must approach junctions, railroad crossings at grade, and drawbridges, prepared to stop, and must not proceed until the switches or signals are seen to be right, or the track is plainly seen to be clear. Where required by law, all trains must stop.

95. No train must leave a junction, a terminal, or other starting point, until it is ascertained that all trains due, which have the right of track against it, have arrived.

96. When a passenger train is detained at any of its usual stops more than three minutes, the flagman must go back with danger signals and protect his train, as provided in Rule No. 99; but if it stops at any unusual point, the flagman must immediately go back far enough to be seen from a train moving in the same direction when it is at least thirteen telegraph poles from the rear of his own train, and if the stop is over three minutes he must be governed by Rule No. 99.

NOTE—When necessary to protect front end of train the front brakeman will be subject to orders and instructions of engineer.

97. When a freight train is detained at any of its usual stops more than three minutes, where the rear of the train can be plainly seen from a train moving in the same direction at a distance of at least fifteen telegraph poles, the flagman must go back with danger signals not less than one pole, and as much further as may be necessary to protect his train; but if the rear of his train cannot be plainly seen at a distance of at least fifteen telegraph poles, or if it stops at any point that is not its usual stopping place, the flagman must go back far enough to be seen from a train moving in the same direction when it is at least fifteen telegraph poles from the rear of his own train; and if his train should be detained until within ten minutes of the time of a passenger train moving in the same direction, he must be governed by Rule No. 99.

NOTE—When necessary to protect front end of train the front brakemen will be subject to orders and instructions of engineer.

98. When it is necessary for the flagman to go back to protect the rear of his train, the next brakeman must immediately take the flagman's position on the

train, and remain there until relieved by the flagman; and on passenger trains the train porter must take the place of the front brakeman whenever necessary.

99. When a train is stopped by an accident or obstruction, the flagman must immediately go back with danger signals to stop any train moving in the same direction. At a point thirteen telegraph poles from the rear of his train he must place **one** torpedo on the rail; he must then continue to go back at least fifteen telegraph poles from the rear of his train, and place **two** torpedoes on the rail, ten yards apart (one rail length), when he may return to a point thirteen telegraph poles from the rear of his train, and he must remain there until recalled by the whistle of his engine; but if a passenger train is due within **ten** minutes, he must remain until it arrives. When he comes in he will remove the torpedo nearest to the train, but the **two** torpedoes must be left on the rail as a caution signal to any following train.

NOTE—When necessary to protect front end of train the front brakemen will be subject to orders and instructions of engineer.

103. If a train should part while in motion, trainmen must use great care to prevent the detached parts from coming into collision. Enginemen must give the signal as provided in Rule No. 43, and keep the front part of the train in motion until the detached portion is stopped. The front portion will have the right to go back, regardless of all trains, to recover the detached portion, first sending a flagman with danger signals thirteen telegraph poles in the direction in which the train is to be backed, and running with great caution, at a speed not exceeding four miles per hour. All the precautions required by the Rules must also be taken to protect the train against oppos-

ing trains. **The detached portion must not be moved or passed around until the front portion comes back.** This rule applies to trains of every class. An exception will only be made to the above when it is known that the detached portion has been stopped, and when the whole occurrence is in plain view, no curves or other obstructions intervening, so that signals can be seen from both portions of the train. In that event the conductor and engine-man may arrange for the re-coupling, using the greatest caution.

104. When a train is being pushed by an engine (except when shifting and making up trains in yards) a flagman must be stationed in a conspicuous position on the front of the leading car, so as to perceive the first sign of danger, and immediately signal the engineman.

105. A train starting from a station, or leaving a junction, when a train of the same class running in the same direction is overdue, will proceed on its own time and rights, and the overdue train will run as provided in Rule 88 or 89. (See Rule 522.)

106. A train which is delayed, and falls back on the time of another train of the same class, does not lose its rights.

107. Regular trains twelve hours or more behind their schedule time lose all their rights.

108. A train overtaking another train of the same or superior class, **disabled so that it cannot move,** will run around it, assuming the rights and taking the orders of the disabled train, to the next telegraph office which is open, where it will report to the Superintendent. The disabled train will assume the rights of the last train passing it till the next telegraph office is reached.

109. All messages or orders respecting the movement of trains or the condition of track or bridges must be in writing.

110. Trains must not display signals for a following train without an order from the Superintendent.

111. Passenger-special and extra trains must not be run without an order from the Superintendent.

112. When signals displayed for a following train are taken down at any point before the following train arrives, the conductor must inform the Superintendent promptly by telegraph, and also the operator or switchtender; and the latter, unless there is some other provision for the purpose, must notify all opposing trains of the same or inferior class leaving that point before the train arrives for which signals were displayed.

If signals are taken down at a point where there is no operator, switchtender, or other provision for the purpose, the conductor must notify all opposing trains of the same or inferior class until he reaches the next telegraph office when he must inform the Superintendent; and the operator, unless there is some other provision for the purpose, must notify all opposing trains of the same or inferior class until directed otherwise by the Superintendent.

If the train for which signals were displayed leaves the main line at a point where there is no operator, switchtender, or other provision for the purpose, a flagman must be left to notify opposing trains that it has arrived.

113. Work trains will be run as extras under special orders, and will be assigned working limits.

114. Great care must be exercised by the trainmen of a train approaching a station where any train is receiving or discharging passengers.

116. No person will be permitted to ride on an engine except the engineman, fireman and other designated employees, in the discharge of their duties, without a written order from the proper authority.

117. Conductors will be held responsible for the proper adjustment of the switches used by them and their trainmen, except where switchtenders are stationed.

Whoever opens a switch shall remain at it until it is closed, unless relieved by some other competent employee.

When there is more than one train to use a switch it must not be left open unless one of the trainmen of the following train is at the switch and takes charge of it.

118. Accidents, detention of trains, failure in the supply of water or fuel, or defects in the track or bridges, must be promptly reported by telegraph to the Superintendent.

119. No train shall leave a station without a signal from its conductor.

120. Conductors and enginemen will be held equally responsible for the violation of any of the rules governing the safety of their trains, **and they must take every precaution for the protection of their trains, even if not provided for by the rule.**

121. **In all cases of doubt or uncertainty, take the safe course and run no risks.**

SPECIAL RULES.

ALL EMPLOYEES.

300. **The use of intoxicating Drinks is strictly forbidden. Total abstinence in this particular is necessary to safety in operating the road. Any employee drinking intoxicating liquors (or smoking on Passenger Trains) while on duty, will be dismissed from the service of the Company, and all employees are required to report immediately to the Superintendent any violation of this Rule.**

301. When a person is discharged from one department or division of the company's service he **shall not be re-employed** without the consent of the officer who dismissed him, or that of the head of the department or division to which he belonged, subject to the approval of the General Manager, or General Superintendent.

303. No employee, whatever may be his rank, will be allowed to absent himself from duty without permission from the head of the department in which he is engaged.

304. Enginemen are at all times under the direction of the Superintendent of the division on which they are working, after crossing the turn-table for service. In emergencies the employees of all departments must promptly obey the orders of the Superintendent.

305. All accidents must be reported by wire, from nearest telegraph station to the Superintendent, and a written report, on Form M. 231, must be forwarded to the proper officer.

306. It is made the duty of every employee in the service, regardless of departments, to report defects in road or bridges, or obstructions of any kind, wherever met, to the Superintendent, and, if possible, to the

nearest section master or bridge foreman. When necessary, flags and torpedoes must be left to notify approaching trains: and when there is any reason to believe that the safety of the track or of any structure is endangered through floods, fires or other causes, every employee before attempting its use, must make a personal inspection, using all precautions in the interest of life and property.

TRAINMEN.

307. Freight and work trains must not, at any time, exceed a speed of one mile in two and one-half minutes. On specified portions of track, limits of speed will be defined by special Division instructions.

308. **At all schedule meeting points and at meeting points made by time orders for trains of the same class, the train having the right of track must, if the train to be met has not arrived, wait three minutes beyond its schedule leaving time, or the time stated by the order, and will then proceed, keeping three minutes behind its schedule time, until the expected train is met.**

309. Trainmen must consult bulletin boards daily.

310. Conductors and brakemen of **all** trains meeting or passing, or when approaching a station, **must be out** looking for signals, and be prepared to do anything required for safety or expedition.

a. Engineers on approaching stations must sound one long blast of the whistle, which will be answered by the operator, if the station is a telegraph station, by a change of his signal from red to nothing by day, and from a red to a white light by night. Should the whistle not be answered in the proper manner by the operator, the engineer will then sound four short blasts of the whistle as a call for signals. In case a

train or any part of it has passed the telegraph office, and although still at the station, operators will not accept orders from dispatcher for such train until conductor and engineer have been notified in person that they are held for orders.

311. Trains will be under the control of the conductors. (See Rule 120).

312. Immediately before starting out on their runs, conductors must go in person to telegraph office and ask for orders. Conductors must register their trains at register stations which will be indicated for each division in special instructions.

313. Conductors and trainmen of all trains are required to be at the station at least thirty minutes before the time of departure. They must see that their train is in proper order and everything in readiness to start.

314. Shortly before reaching a station at which the train stops, the conductor, brakeman or porter must pass through each coach, except the sleeping cars, and announce twice, distinctly, with closed doors, the name of the station they are approaching. On arrival at terminal stations, they must remain with their train until passengers have alighted, and see that all needful assistance is given them.

315. In leaving cars at sidings, care must be used to leave wagon roads in daily use by the public unobstructed their entire width. When trains remain at stations to exceed five minutes, the train must be cut to open all crossings if there be any persons who desire to cross.

316. Conductors must prevent passengers endangering themselves by imprudent exposure. The circumstances under which passengers may be ejected from

trains are fully covered below. **Use no Unnecessary Force**

a. A railroad company has the right to eject from its trains any passenger who refuses upon demand to produce a proper ticket or other transportation, or pay his fare to his destination, and may be expelled at any point on the line of the road, whether at a station or otherwise, with this limitation: in case a person is, by reason of any infirmity, unable to travel or find his way from the point where he is put off to a dwelling-house or town, or the weather is so inclement as to render it unsafe or inhuman to eject a person at a point other than a station, then such person should be ejected from the train at a station where suitable accommodations can be procured for his safety and comfort.

b. Drunken or disorderly persons, or others whose conduct and appearance is such as is calculated to operate as a serious annoyance to other passengers, or is disgusting, or a passenger who is guilty of gross misconduct, either by insulting or assaulting other passengers or train employees, who uses vile or profane language in the car, or who threatens to assault other passengers or train employees, may lawfully be expelled from the train at any place, provided the place is not such as to cause want or injury; this may be done whether fare has been paid or not.

317. Conductors of freight trains not equipped with automatic brake must see that brakemen govern the rate of speed of their trains while descending a grade. The brakes should never be applied so as to slip the wheels, and in descending heavy grades, brakemen should see that the brakes are not kept on so long as to heat the wheels. To avoid this, the brakes should be frequently changed from one car to another.

318. Conductors will be held responsible for the faithful performance of duty by the brakemen on their trains. They must require the doors of all **freight cars** in their trains **to be closed**, and must, in all cases, when ascending or descending grades, station themselves on the rear part of the train, and see that their brakemen are at their posts.

319. When a freight train is composed of two or more sections running on the same time, the rear train must do the local work, and, if allowed to take passengers, is the only one on which they will be carried under any circumstances, except persons in charge of live stock.

320. Conductors must comply with instructions of agents in placing cars and doing other station work. If necessary to disturb the cars for loading or unloading, they must be replaced in the same condition as found. In case agent's orders are unreasonable the fact must be reported to Superintendent. It is the duty of agents to report violations of this rule and all cases where conductors refuse cars that are ready to go.

321. Conductors must see that the words "*bad order*" are written with chalk on both sides of disabled cars left at stations, defective parts marked with a cross. In no case must a car be left on a grade, or at stations, without the brake being set and wheels blocked.

322. Potter (three link) drawheads must be connected with the two outside, or one centre link, but the outside links must not be used to couple with a single drawhead.

323. Work extras must not use main track without special orders. They must be kept ten (10) minutes

out of the way of *all scheduled trains*, but will have the right to work whenever freight trains are thirty (30) minutes late, taking care to flag approaching trains thirteen telegraph poles in both directions. Conductors of work trains must notify the dispatcher's office the night previous of the limits within which they desire to work the following day. If it should become necessary to go outside of such limit, it must be done with flag to next telegraph office, where orders must be obtained.

324. Great care must be exercised by all persons when coupling cars. Inasmuch as the coupling apparatus of cars or of engines cannot be uniform in style, size or strength, and is liable to be broken, and, from various causes, to render it dangerous to expose the hands, arms or person, of those engaged in coupling between them, all employees are **enjoined**, before coupling cars or engines, to **examine**, so as to **know** the kind and condition of the drawhead, drawbar, link and coupling apparatus; and are prohibited from placing in trains any car with a defective coupling until they have first reported its defective condition to the conductor. Sufficient time is allowed, and may be taken by employees, in all cases, to make the examination required. Coupling by hand is strictly prohibited in all cases where a stick can be used to guide the link; and each yardmaster, switchman, brakeman, or other employee who may be expected to couple cars, is required to provide himself at all times with a stick for that purpose.

325. Every employee is required to exercise the utmost caution to avoid injury to himself or to his fellows, and especially in the switching or other movement of trains. Jumping on or off trains or engines in motion, entering between cars in motion to couple or uncouple

them, and all similar imprudences, are forbidden. Conductors, yardmasters, foremen and all others in authority, are instructed to enforce this rule and to punish all violators of it. No person who is careless of others or himself shall be continued in the service of this company.

326. Great care must be taken to prevent killing live stock. Bring the train to a full stop if necessary. Should any be killed or struck, enginemen must report in writing on blank form M. P. and M. 68, to proper officer.

327. Irregular trains, and regular trains behind time, must sound the whistle repeatedly in obscure places to warn section and bridgemen. The same precaution must be used in fogs and snow storms.

328. Freight trains and work extras must approach and pass all stations carefully with train under full control, expecting to find the main track, inside of yard limit boards, occupied by trains doing work. Irregular trains and regular trains not on time will run carefully and look out for switch engines inside yard limit posts.

329. Enginemen and firemen must not, at the same time, absent themselves from the engine while on duty.

330. Come to full stop at all drawbridges, and railroad crossings at grade.

331. Dampers of ash pans must in all cases be closed while engines are crossing bridges and passing wood yards.

STATION AGENTS.

332. Station agents are required to see that the doors of all cars on the side tracks are securely fastened,

that the brakes are set and the cars far enough from the main track as not to endanger passing trains, and that the wheels of all cars on side tracks are properly blocked. Cars must *never be allowed to stand on the main track.*

333. Station agents will be held responsible for the proper security and position of the switches, and must in no case allow them to be turned from the main track, except when a train is to leave or enter a side track.

334. Station agents and operators must keep trains the proper time limit apart with their fixed signals. (See Rules 87, 88 and 89.)

YARDMEN.

335. Yardmasters will have charge, and direct the movements of all trains and engines whilst at their stations. They must see that all trains are properly made up at the time of leaving, as per Time-table. Before going on duty, yardmasters must report for, and receive in writing, all instructions regarding incoming and outgoing trains.

336. Yardmasters will be held responsible for the proper position of their switches, which must be set for all trains. This will not relieve enginemen from blame for running through an open switch.

337. All main line switches in yards must invariably be set and locked for main track. Inside switches must be left as found.

338. Yard engines, within their limits, may use the main track day and night, keeping out of the way of all regular and irregular trains. Irregular trains must approach yard limits with train under full control.

SECTIONMEN AND BRIDGEMEN.

339. Section Foreman, or a reliable man, must pass over and examine their sections daily, and ascertain that the track, slopes, cuts and bridges are safe. This should be done in the morning.

340. They must see that no lumber, wood, stone, materials or tools are placed at any time within six feet of the rail.

341. Before a rail or frog is taken out, or any obstruction is caused to the main track, or when any break or obstruction is discovered, the danger signal must be sent out in both directions, at least **fifteen** telegraph poles from the point of danger, and a competent man must remain and keep it displayed until he is recalled by the Foreman, which must not be done until the track is known to be safe.

342. In stormy weather Section Foremen must be out with their men (day or night), with proper signals, and watch those places most liable to wash or be disturbed.

343. It is also the duty of the trackmen to put out fires set by engines, and to guard the property of others, as well as that of the railroad company exposed to such fires, whether responsibility attaches to the company or not.

344. Sectionmen must pay particular attention to the telegraph lines. In case the wires are found broken or on the ground, crossed or in any way obstructed, they must be repaired in a temporary manner **immediately**, and where such repairs are impracticable notice must be given to the nearest telegraph office by messenger or the earliest means practicable.

345. At all times when work is going on which renders it necessary for trains to reduce speed, a green

flag must be set at side of track at least **fifteen** telegraph poles from the spot, on engineer's side, in each direction, as a caution to approaching trains to run slowly. After severe rains or a thaw, a hand car must be sent over the road before the passage of regular trains.

346. Hand cars or other property belonging to the company must not be used except for the business of the company.

347. Sectionmen must, at all times, hold themselves in readiness to aid the passage of trains, and in cases of accident must obey the orders of the Conductor of the delayed train.

348. Every man at work on the track must bear in mind that in operating the road under telegraph orders a train may **Pass at any Moment**.

349. Road Masters must see that all gangs are always supplied with proper signal flags, lanterns, etc., and that they are thoroughly instructed as to their use.

350. Section Foremen must see that fences on each side of the road and at crossings are in good order, and that cattle-guards are in repair. A break in a fence should not be overlooked, and when it cannot be repaired for want of material the Section Foreman must give the Roadmaster immediate notice of it, stating what material is required. When fences are taken down for any purpose they must be replaced without unnecessary delay.

351. A report of all stock injured or killed must be forwarded on form T. D. 26 to Superintendent by first train.

352. All property found on the road must be forwarded to the Superintendent, or notice given him of being found.

TEXAS STATE LAWS GOVERNING RAILROAD EMPLOYEES.

353. Art. 4228.—“Every Conductor, Baggage Master, Engineer, Brakeman or other servant of any such railroad corporation, employed in a passenger train, or at stations for passengers, shall wear upon his hat or cap a badge which shall indicate his office, and the initial letters of the style of the corporation by which he is employed.”

354. Art. 4229.—“No Conductor or Collector without such badge shall demand or be entitled to receive from any passenger any fare, toll, ticket, or exercise any of the powers of his office; and no other of the said officers or servants, without such badge, shall have any authority to meddle or interfere with the passengers, their baggage or property.”

355. Art. 4232.—“A bell of at least thirty pounds weight, or a steam whistle shall be placed on each locomotive, and the whistle shall be blown or the bell rung the distance of at least eighty rods from the place where the railroad shall cross any public road or street, and that such bell shall be kept ringing until it shall have crossed such public road or stopped; and each locomotive engine approaching a place where two lines of railway cross each other shall, before reaching such railway crossing, be brought to a full stop. And any engineer having charge of such engine and neglecting to comply with any of the provisions of this act, shall be fined in any sum not less than five nor more than one hundred dollars for such neglect, and the corporation operating such railroad shall be liable

for all damages which shall be sustained by any person by reason of any such neglect."

356. Art. 4233.—"In forming a passenger train, baggage or freight or merchandise or lumber cars shall not be placed in rear of passenger cars; and if they, or any of them, shall be so placed and any accident happens to life or limb, the officer or agent who so directed or knowingly suffered such an arrangement, and the Conductor and Engineer of the train shall each and all be held guilty of intentionally causing the injury and be punished accordingly."

The attention of all employees is called to the extracts of law published above.

Engineers are cautioned against any failure to comply with the law concerning whistling and bell-ringing, and are instructed to use **both** the whistle and the bell at highway crossings.

Rules for the Movement of Trains by Telegraphic Orders.

500. Special orders, directing movements varying from or additional to the Time-table, will be issued by the authority and over the signature of the Superintendent. They are not to be used for movements that can be provided for by rule or Time-table. They must not contain information or instructions not essentially a part of them.

They must be brief and clear, and the prescribed forms must be used when applicable; and there must be no erasures, alterations or interlineations.

501. Each order must be given in the same words to all persons or trains directly affected by it, so that each shall have a duplicate of what is given to the others. Preferably an order should include but one specified movement.

502. Orders will be numbered consecutively for each day as issued, beginning with No. 1 at midnight.

503. Orders must be addressed to those who are to execute them, naming the place at which each is to receive his copy. Those for a train must be addressed to the conductor and engineman, and also to a person acting as pilot. A copy for each person addressed must be supplied by the operator.

504. Each order must be written in full in a book provided for the purpose at the Superintendent's office; and with it must be recorded the names of trainmen and others who have signed for the order; the time and signals, showing when and from what offices the order and responses were transmitted; and the train dispatcher's initials. These records must be made at once on the original copy, and not afterward, from memory or memoranda.

505. The terms "superior right" and "inferior right" in these rules, refer to the rights of trains under the Time-table and Train Rules, and not to rights under Special Orders.

506. When an order is to be transmitted, the signal "31" (as provided in Rule 509), meaning "Train Order," will be given to each office addressed, followed by the word "copy," and a figure indicating the number of copies to be made, if more or less than three—thus, "31 copy 5."

507. An order to be sent to two or more offices must be transmitted simultaneously to as many as practicable. The several addresses must be in the order of superiority of rights of trains, and each office will take only its proper address. When not sent simultaneously to all, the order must be sent first for the train having the superior right of track.

508. Operators receiving orders must write them out in manifold during transmission and make the requisite number of copies at one writing, or trace others from one of the copies first made.

509. When an order has been transmitted, preceded by the signal "31," operators receiving it must (unless otherwise directed) repeat it back at once from the manifold copy, and in the succession in which their several offices have been addressed. Each operator repeating must observe whether the others repeat correctly. After the order has been repeated correctly by the operators required at the time to repeat it, the response "O K," authorized by the train dispatcher, will be sent, simultaneously to as many as practicable, naming each office. Each operator must write this on the order with the time, and then reply "i i O K," with his office signal.

Those to whom the order is addressed must then sign their names to the copy of the order to be retained by the operator, and he will send their signatures to the Superintendent. The response "complete," with the Superintendent's initials, will then be given, when authorized by the train dispatcher. Each operator receiving this response will then write on each copy the word "complete;" the time; and his last name in full; and will then deliver a copy to each person included in the address, and each must read his copy aloud to the operator.

510. For an order preceded by the signal "31," "complete" must not be given to the order for delivery to a train of inferior right until "O K" has been given to and acknowledged by the operator who receives the order for the train of superior right. Whenever practicable, the signature of the conductor and engineman of the train of superior right must be taken to the order and "complete" given before the train of inferior right is allowed to act on it.

After "O K" has been given and acknowledged, and **before** "complete" has been given, the order must be treated as a holding order for the train addressed, but must not be otherwise acted on until "complete" has been given.

If the line fails **before an office has received and acknowledged** "O K" to an order preceded by the signal "31," the order at that office is of no effect, and must be there treated as if it had not been sent.

513. The order, the "O K" and the "complete" must each, in transmitting, be preceded by "31" and the number of the order, thus: "31, No. 10." In transmitting the signatures of the conductor and en-

gineman they must be preceded by "31," the number of the order and the train number, thus: "31, No. 10, Train No. 5." After each transmission and response the sending operator must give his office signal.

514. The operator who receives and delivers an order must preserve the lowest copy. On this must appear the signatures of those who sign for the order, and on it he must record the time when he receives it; the responses; the time when they are received; his own name; the date; and the train number, for which places are provided in the blanks. These copies must be sent to the Superintendent.

515. Orders used by conductors must be sent by them daily to the Superintendent.

516. Enginemen will place their orders in the clip before them until executed.

517. For orders delivered at the Superintendent's office the requirements as to record and delivery will be the same as at other points.

518. Orders to persons in charge of work requiring the use of track in yards or at other points, authorizing such use when trains are late, must be delivered in the same way as to conductors of trains.

519. An order to be delivered to a train at a point not a telegraph station, or while the office is closed, must be addressed to

"*C. and E., No. — (at —), care of —,*" and forwarded and delivered by the conductor or other person in whose care it is addressed. "Complete" will be given upon the signature of the person by whom the order is to be delivered, who must be supplied with copies for the conductor and engineman addressed, and a copy upon which he shall take their

signatures. This copy he must deliver to the first operator accessible, who must preserve it, and at once advise the train dispatcher of its having been received.

Orders so delivered to a train must be compared by those receiving them with the copy held by the person delivering and acted on as if "complete" had been given in the ordinary way.

Orders must not be sent in the manner herein provided, to trains the rights of which are thereby restricted.

520. When a train is named in an order, all its sections are included unless particular sections are specified, and each section included must have copies addressed and delivered to it.

521. Meeting orders must not be sent for delivery to trains at the meeting point if it can be avoided. When it cannot be avoided, special precautions must be taken by the train dispatchers and operators to insure safety.

There should be, if possible, at least one telegraph office between those at which opposing trains receive meeting orders.

Orders should not be sent an unnecessarily long time before delivery, or to points unnecessarily distant from where they are to be executed. No orders (except those affecting the train at that point), should be delivered to a freight train at a station where it has much work, until after the work is done.

522. A train, or any section of a train, must be governed strictly by the terms of orders addressed to it and must not assume rights not conferred by such orders. In all other respects it must be governed by the Train Rules and Time-table.

523. Orders once in effect continue so until fulfilled, superseded or annulled. Orders held by or issued for a regular train which has lost its rights, as provided by Rule 107, are annulled and other trains will be governed accordingly.

524 (a). A fixed signal must be used at each train order office, which shall display red at all times when there is an operator on duty, except when changed to white to allow a train to pass.

While red is displayed, all trains must come to a full stop, and any train thus stopped must not proceed without an order addressed to such train, or a clearance card on a specified form stating over the operator's signature that he has no orders for it. Operators must be prepared with other signals to use promptly if the fixed signal should fail to work properly. If a signal is not displayed at a night office, trains which have not been previously notified must stop and inquire the cause, and report the facts to the Superintendent from the next open telegraph office. (See Rule 334).

NOTE—Operators at terminals must give regular trains clearance cards when they have no orders for them.

525. Operators will promptly record and report to the Superintendent the time of departure of all trains and the direction in which extra trains are moving. They will record the time of arrival of trains and report it when so directed.

526. Regular trains will be designated in orders by their schedule numbers, as "No. 10," or "2nd No. 10," extra trains by engine numbers, as "Extra 798;" and all other numbers by figures. The direction of the movement of extras will be added

when necessary, as "East" or "West." Time will be stated in figures only.

527. The following signs and abbreviations may be used:

Initials for Superintendent's signature.

Such office and other signals as are arranged by the Superintendent.

C & E—for Conductor and Engineman.

O K—As provided in these rules.

Min—for Minutes.

Junc—for Junction.

Frt—for Freight.

No—for Number.

Eng—for Engine.

Sec—for Section.

Opr—for Operator.

9—to clear the line for Train Orders.

15—For Operators to ask for or to repeat Train Orders.

31—for Train Order as provided in the rules. The usual abbreviations for the names of the months.

FORMS OF TRAIN ORDERS.

Form A.—Fixing Meeting Point for Opposing Trains.

— and — will meet at —.

EXAMPLES.

No. 1 and No. 2 will meet at Bombay.

No. 3 and 2d No. 4 will meet at Siam.

No. 5 and Extra 95 will meet at Hong Kong.

Extra 652 North and Extra 231 South will meet at Yokahama.

Trains receiving this order will, with respect to each other, run to the designated point, and having arrived there will pass in the manner provided by the rules.

Form B.—Authorizing a Train to run ahead of or Pass Another Train Running in the Same Direction.

(1.) — will pass — at —.

(2.) — will run ahead of —, from — to —.

EXAMPLES.

(1.) *No. 1 will pass No. 3 at Khortoum.*

(2.) *No. 4 will run ahead of No. 6 from Bengal to Madras.*

When under this order a train is to pass another, both trains will run according to rule to the designated point, and there arrange for the rear train to pass promptly.

Form C.—Giving a Train of Inferior Right the Right of Track Against an Opposing Train of Superior Right.

— has right of track against — — to —.

EXAMPLES.

(1.) *No. 2 has right of track against No. 1 Mecca to Mirbat.*

(2) *Extra 37 has right of track against No. 3 Natal to Rattam.*

This order gives a train of inferior right the right of track against one of superior right, to a designated point.

If the trains meet at the designated point, the train of inferior right must take the siding, unless the rules or orders otherwise indicate.

Under this order, as illustrated by example (1), if the train of superior right reaches the designated point before the other arrives it may proceed, provided it keeps clear of the schedule time of the train of inferior right as many minutes as the inferior train was before required by the train rules to keep clear of the superior train.

If the train of superior right, before meeting, reaches a point beyond that named in the order, the conductor must stop the other train where it is met and inform it of his arrival.

Under example (2) the train of superior right cannot go beyond the designated point until the extra train arrives.

When the train of inferior right has reached the designated point, the order is fulfilled, and the train must then be governed by time-table and train rules or further orders.

The following modification of this form of order will be applicable for giving a work train the right of track over all other trains, in case of a wreck or break in the track.

EXAMPLE.

Work Extra 275 has right of track over all trains between Stockholm and Edinburg from 7 P. M.

This gives the work extra the exclusive right of the track between the points designated.

Form D.—Giving all Regular Trains the Right of Track Over a Given Train.

All regular trains have right of track against _____ between _____ and _____.

EXAMPLE.

All regular trains have right of track against No. 1 between Moscow and Berlin.

This order gives to any regular train of inferior right receiving it the right of track over the train named in the order, and the latter must clear the schedule times of all regular trains, the same as if it were an extra.

Form E.—Time Orders.

- (1.) _____ will run _____ late from _____ to _____.
 (2.) _____ will wait at _____ until _____ for _____.

EXAMPLES.

- (1.) *No. 1 will run 20 min. late from Joppa to Mainz.*
 (2.) *No. 1 will wait at Muscat until 10 a. m. for No. 2.*

Form (1) makes the schedule time of the train named, between the points mentioned, as much later as the time stated in the order, and any other train receiving the order is required to run with respect to this later time, the same as before required to run with respect to the regular schedule time. The time in the order should be such as can be easily added to the schedule time.

Under form (2) the train of superior right must not pass the designated point before the time given unless the other train has arrived. The train of inferior

right is required to run with respect to the time specified the same as before required to run with respect to the regular schedule time of the train of superior right.

Form F.—For Sections of Regular Trains.

_____ will carry signals _____ to _____ for _____.

EXAMPLES.

No. 1 will carry signals Astrakhan to Cabul for Eng. 85.

2nd No. 1 will carry signals London to Dover for Eng. 90.

This may be modified as follows :

Engines 70, 85 and 90 will run as 1st, 2nd and 3d sections of No. 1 London to Dover.

For annulling a section :

Eng. 85 is annulled as 2nd section of No. 1 from Dover :

If there are other sections following add :

Following sections will change numbers accordingly.

The character of train for which signals are carried may be stated. Each section affected by the order must have copies, and must arrange signals accordingly.

Form G.—For Arranging a Schedule for a Passenger Special Train.

(1). Eng. _____ will run as passenger special, leaving _____ on _____ on the following schedule, and will have the right of track over all trains :

Leave _____.

_____.

• Arrive _____.

EXAMPLE.

(1.) *Eng. 77 will run as passenger special, leaving Turin on Thursday, Feb. 17th, on the following schedule, and will have the right of track over all trains:*

Leave Turin 11:30 p. m.

Pekin 12:25 a. m.

Canton 1:47 a. m.

Arrive Rome 2:22 a. m.

Example (1) may be varied by specifying particular trains over which the special shall or shall not have right of track, and any train over which the special train is thus given the right of track must clear its time as many minutes as such train is required to clear the schedule time of a first-class train.

(2.) Eng. — will run as passenger special, leaving — on — with the rights of a — class train, —, on the following schedule, which is a supplement to time table No. —.

Leave —.

Arrive —.

EXAMPLE.

(2.) *Eng. 75 will run as passenger special, leaving Geneva, Thursday, Feb. 17th, with the rights of a first-class train east, on the following schedule, which is a supplement to time-table No. 10:*

Leave Geneva 10 a.m.

Pekin 10:30 a.m., passing No. 12.

Canton 11 a.m., meeting No. 7.

Arrive Athens 11:30 a.m.

Example (2) creates a regular train and the specified meeting and passing points are to be regarded as if designated in the same manner as on the time-table.

Such trains will be governed by all rules which affect regular trains.

Form H—Extra Trains.

— will run extra from — to —.

EXAMPLE.

(a.) *Eng. 99 will run extra from Berber to Gaza.*

A train receiving an order to run extra is not required to guard against opposing extras, unless directed by order to do so, but must keep clear of all regular trains as required by rule.

A "work train" is an extra, for which the above form will be used for a direct run in one direction. The authority to occupy a specified portion of the track, as an extra while working, will be given in the following form:

(b.) *Eng. 292 will work as an extra from 7 a.m. until 6 p.m. between Berne and Turin.*

The working limits should be as short as practicable, to be changed as the progress of the work may require. The above may be combined thus:

(c.) *Eng. 292 will run extra from Berne to Turin and work as an extra from 7 a.m. until 6 p.m. between Turin and Rome.*

When an order has been given to "work" between designated points, no other extra must be authorized to run over that part of the track without provision for passing the work train.

When it is anticipated that a work train may be where it cannot be reached for meeting or passing orders, it may be directed to report for orders at a given time and place, or an order may be given that it shall

clear the track for a designated extra, in the following form :

(d.) *Work Train 292 will keep clear of Extra 223, south, between Antwerp and Brussels after 2:10 p.m.*

In this case extra 223 must not pass either of the points named before 2:10 p.m., at which time the work train must be out of the way between those points.

When the movement of an extra train over the working limits cannot be anticipated by these or other orders to the work train, an order must be given to such extra, to protect itself against the work train, in the following form :

(e.) *Extra 76 will protect itself against work train extra 95 between Lyons and Paris.*

This may be added to the order to run extra.

A work train when met or overtaken by an extra must allow it to pass without unnecessary detention.

When the conditions are such that it may be considered desirable to require that work trains shall at all times protect themselves while on working limits, this may be done under the following arrangements. To example (b) add the following words :

(f.) *protecting itself against all trains.*

A train receiving this order must, whether standing or moving, protect itself within the working limits, in both directions, against all trains, in the manner provided in Rule 99.

When an extra receives orders to run over working limits it must be advised that the work train is within those limits by adding to example (a) the words :

(g.) *Eng. 292 is working as an extra between Berne and Turin.*

A train receiving this order must run expecting to find the work train within the limits named.

Form J.—Holding Order.

Hold ———.

EXAMPLES.

(1.) *Hold No. 2.*

(2.) *Hold all trains east.*

As any order for which "O K" has been given and acknowledged operates as a holding order for the train to which it is addressed, this form will only be used in special cases, to hold trains until orders can be given or for some other emergency. The reason for holding may be added, as "for orders."

This order is not to be used for holding a train, while orders are given to other trains against it, which are not at the same time given to it in duplicate. It must be respected by conductors and enginemen of trains thereby directed to be held as if addressed to them. Conductors when informed of the order must sign for it, and their signatures must be sent and "complete" obtained.

When a train has been so held it must not go until the order to hold is annulled, or an order is given in the form :

"——— may go."

This must be addressed to the person or persons to whom the order to hold was addressed and must be delivered in the same manner.

Form K.—Annuling a Schedule Train.

——— of —— is annulled.

EXAMPLES.

(1.) *No. 1 of Feb. 29th is annulled.*

(2.) *No. 3 due to leave Naples Saturday, Feb. 29th, is annulled.*

Adding "*from Alaska,*" or "*between Alaska and Halifax,*" when appropriate.

This order takes away all rights of the train annulled and authorizes any train or person receiving it to use the track as if the train annulled were not on the time-table.

If a train is annulled to a point named, its rights beyond that point remain unaffected.

The train dispatcher may direct any operator to omit repeating back an order annulling a train, until he has occasion to deliver it.

When a train has been annulled it must not be again restored under its original number by special order.

Form L.—Annulling or Superseding an Order.

"Order No. — is annulled."

This will be numbered, transmitted and signed for as other orders.

If an order which is to be annulled has not been delivered to a train, the annulling order will be addressed to the operator, who will destroy all copies of the order annulled but his own, and write on *that*:

Annulled by order No. —.

An order superseding another may be given, adding "*this supersedes order No. —,*" or adding "*instead of —.*"

EXAMPLE.

No. 1 and No. 2 will meet at Sparta, instead of at Thebes.

An order which includes more than one specified movement must not be superseded.

An order that has been annulled or superseded must not be again restored by special order under its original number.

In the address of an order annulling or superseding another order, the train first named must be that to which rights were given by the order annulled or superseded, and when the order is not transmitted simultaneously to all concerned, it must be sent to the point at which that train is to receive it, and the required response first given, before the order is sent for other trains.

Instructions Governing the Use of the Westinghouse Air Brake.

These instructions cover the new form of Westinghouse Quick Acting Brake with which passenger and freight cars are now being equipped. It can be operated with the old Automatic Brake, *but cannot be changed to straight air.*

The instructions for the use of the old automatic brakes will be found on page 62.

The distinguishing features of the New Quick Acting Brake are the Triple Valve and Engineers' Valve.

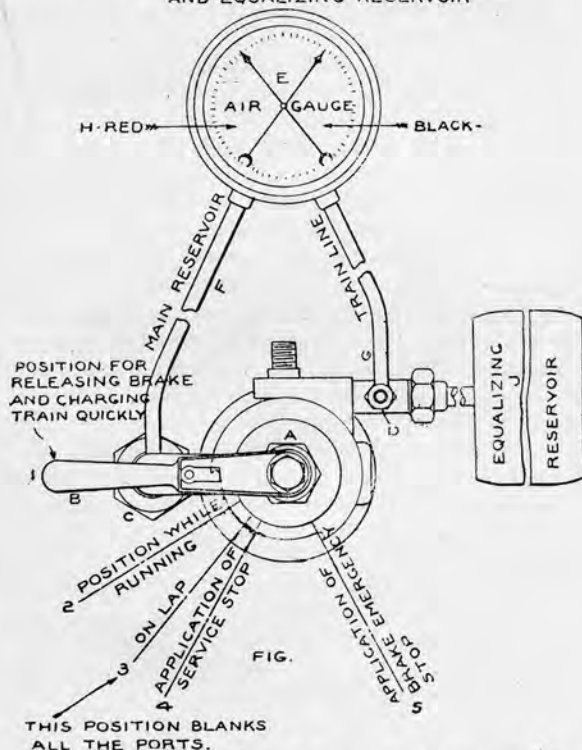
The Engineers' Valve, besides being arranged to make the service and emergency stops, is arranged to produce an *Equalizing discharge* from the train pipe, which insures a *uniform application of all the brakes* and an *excess pressure* in the Main Reservoir, which insures a *quick release of all the brakes.*

In the Quick Acting System the stop cocks in the train pipe at the ends of cars are open when the handles are parallel with the line of the pipe, and are shut when the handles are at right angles with the line of pipe. In the old Automatic System the stop cocks are open when the handles are at right angles to the line of pipe, and are closed when the handles are in line with the pipe.

In the Quick Acting System the stop cocks are cast with an angle and are much larger than the stop cocks in the old system.

INSTRUCTIONS TO ENGINEMEN.

ENGINEMANS BRAKE VALVE, GAUGE,
AND EQUALIZING RESERVOIR



The maximum train pipe pressure is 70 pounds, indicated on gauge by black pointer I. The excess pressure is 20 pounds, making the main reservoir pressure 90 pounds, indicated on gauge by red pointer H.

If the train pipe pressure shows over 70 pounds or the excess pressure over 90 pounds, the governor or excess pressure valve is out of order and should be repaired for correction.

To Release Brakes.—Move handle B to position 1.

To Charge Train Quickly.—Let handle B remain in position 1 until the required train pipe pressure is obtained, as indicated by black pointer on the gauge.

To Obtain Excess Pressure.—Move handle B to position 2. This excess is necessary to insure a quick release of all the brakes; therefore, when running or coupled to a train, the handle B must be kept in running position 2.

To Make a Service Stop or to Reduce Speed of Train.—Move handle B to position 4 and hold it there until the train pipe pressure has been reduced 3 to 8 pounds, as the case may require. The reduction of 3 to 8 pounds is necessary to move the pistons past the leakage grooves in the Brake Cylinders and slightly apply the brakes.

To avoid jerking the train in service stop always release brakes before coming to a full stop, except on grades.

To Hold Brakes On.—Move handle B to position 3.

To Make a Sudden or Emergency Stop.—Move handle B quickly to position 5. Never release brakes in making an emergency stop until after the train has come to a full stop.

Condition of Brake Apparatus on Locomotives and Tenders.

Enginemen, when taking their locomotives, must see that the brake apparatus on locomotive and tender is in good working order; that the air pump and lu-

bricator work properly and that the governor stops the pump when the maximum train pipe and excess pressure is obtained.

The air pump should be constantly run with throttle well open, so that pump and governor may work freely and maintain 70 pounds pressure.

Before coupling to a train enginemen must see that the maximum pressure is obtained with the brake valve handle in running position 2, and the pump throttle well open.

Keep main reservoir and triple valve of tender free from water.

Testing Brakes.—As soon as the locomotive is coupled to the train the brakes must be tested. The handle B must be moved to position 1 and left there until the pressure is equalized throughout the train; this is indicated by the pointers on the gauge remaining stationary or moving forward. At the request of the inspector the engineman should make a full service application of the brakes and hold them on until the inspector shall have passed to the rear end of the train and have examined the brakes on each car. At a signal from the rear end of the train the engineman should release brakes and wait until the inspectors come forward and report that the brakes are all right.

This test must be repeated after every change in the make up of trains, and no train must be started until the inspector shall have notified the engineman that brakes are all right.

Frequent Application and Release of the Brakes.—As the brakes are applied by air from the auxiliary reservoirs, frequent application and release reduces the pressure, and consequently the power to apply the brakes, for while applied the supply of air to the aux-

iliary reservoir is cut off: therefore, after each release the handle of the brake valve must be left in position until the moment brakes are to be applied again or until the maximum train pipe pressure is obtained. One-third reduction of train line pressure will give a full application of brakes; any further reduction of pressure in the train line will be a waste of air.

When the locomotive is standing, either detached or coupled to a train, the handle of the brake valve must be kept in running position 2, unless standing on a grade or testing brakes.

Should the engineman feel the brakes go on suddenly the handle B must be moved quickly to position 3 (to accumulate pressure), and held there until the difficulty has been removed and signal given to release.

The adjustment of the brake rigging must be such that when the brakes are fully applied the piston will run out not less than 2 nor more than $3\frac{1}{2}$ inches on driver brakes, and not less than 4 nor more than 8 inches on tenders and cars.

Pressure retaining valves are only intended for use on long down grades. At all other times the handle I must be vertical.

Trainmen and Train Inspectors.

THE WESTINGHOUSE AUTOMATIC QUICK ACTING BRAKE CANNOT BE CHANGED TO STRAIGHT AIR.

- A - AIR BRAKE COUPLING
- B - STOP COCK ON AIR BRAKE PIPE
- C - TRAIN BRAKE PIPE
- D - BRAKE CYLINDER
- E - AUXILIARY RESERVOIR
- F - TRIPLE VALVE
- G - BRANCH PIPE
- H - STOP COCK
- I - PRESSURE RETAINING VALVE
- J - DUMMY COUPLING
- K - RELEASE VALVE

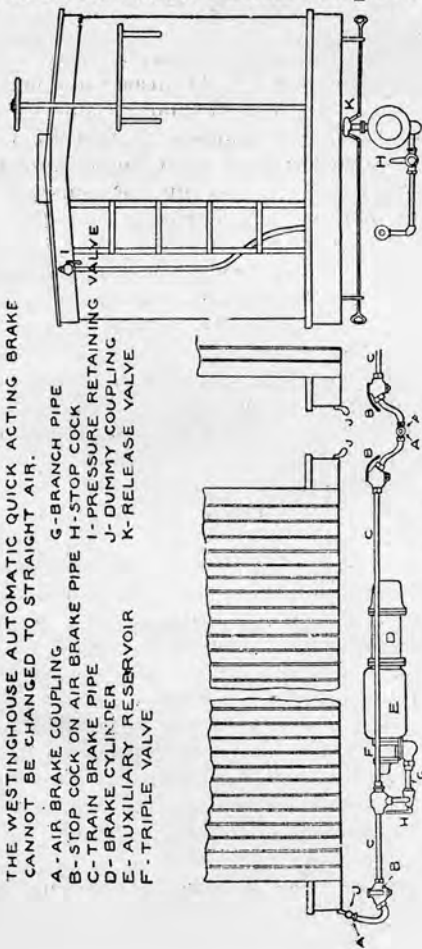


FIG. 2

The conductor is held responsible for the proper trial of the air-brakes by the inspectors and engineers before starting a train from a point where engines shall have been changed. Where there are no inspectors conductors must make the test in person.

To Make Up a Train.—Unite the couplings "A" and turn handles "B" slowly in line with hose couplings, except on rear end of last car, where handle "B" must be turned crosswise of pipe and coupling "A" united with dummy coupling "J." Turn handle "H" in branch pipe vertical (pointing up or crosswise of pipe).

Testing Brakes.—After a train is made up and locomotive coupled to it the inspector shall request the engineman to apply the brakes. Starting from the locomotive he shall pass to the rear of the train, seeing that each brake-shoe is set; that the pistons move out the proper distance, and that there are no leaks or other defects.

From the rear he should signal the engineman to release brakes and must then go forward, making sure that the brakes are released on each car, and notify the engineman that the brakes are all right.

The same operation must be observed after every change in the make up of a train.

Should it be found necessary to make additional applications of brakes on account of defects found in passing along the train, the same may be communicated to the engineman by means of a signal given as follows: A hand or lantern raised above the head and held there until recognized.

The signal to release brakes after testing will be the regular stop signal authorized by the book of rules, viz.: A lamp, a flag, or the hand swung across the track.

Bleeding Brakes Off Should be the Last Resort.

Before starting, trainmen must know that the brakes are in proper working order; that the hand-brakes are all released, and that the handle of pressure retaining valve is pointing down.

No car equipped with automatic air should be cut out of a train without sufficient cause.

Conductor should make report stating why and when he was obliged to cut car out.

The discovery of a defect in the brake apparatus, either before or during a trip, must at once be made known to all trainmen and the engineman, and a proper understanding had in regard to same, to insure safety in handling the train.

Slack must not be taken up by hand-brakes.

To Cut Off a Car or Locomotive.

To cut a locomotive off from a train close cock B on car first, then on tender.

To couple a locomotive to a train open cock B on tender first, and then on car.

To Cut Off a Car.—First—See that the brakes are all released.

Second—Then turn handles B crosswise of pipe on each side of coupling to be separated.

Third—Disconnect the couplings and unite them with the dummy couplings J.

Couplings must always be separated by hand.

To Release a Brake on a Cut Off Freight Car.—Open the release valve "K," until brakes start to release and no longer.

To Release a Brake on a Cut Off Passenger Car.—The bleeding cocks must be opened.

To Cut Out a Defective Brake.—Turn handle "H" in branch pipe horizontal (on line with pipe) and open release valve "K" and fasten it so that it will remain open.

Turning handle "H" horizontal shuts the air off from the defective brake, but allows it to pass through the train pipe to the other cars in the train.

Burst Hose.—When this occurs turn the handle "B," immediately in front, crosswise of pipe, and signal the engineman to release brakes. After the hose has been replaced make the coupling in the usual way and see that brakes are all released.

If Train Breaks in Two.—Turn handle "B" crosswise of pipe on rear end of car, immediately in front of break, and signal engineman to release brakes. When brakes on forward section are released, couple to the rear section in the usual way.

To Apply Brakes from Train.—This can be done in three ways, none of which should be used except in case of emergency:

1. By pulling down on the conductor's Valve Cord and holding it down until the train is stopped.
2. By disconnecting the couplings between two cars.
3. By turning handle "B" on rear end of last car, on line with pipe.

Air brakes and hand brakes must never be applied at the same time on the same cars, as injury to trainmen may result.

Enginemen must not apply the air brake after having signaled for hand brakes, without first signaling "Off Brakes."

This has special reference to trains fully equipped and operated with the air brake.

With trains partially equipped with the air brake the usual call for hand brakes will signify that they must be applied on cars not having air; but continuous calling will signify "No Air," in which event hand brakes must be used on air brake cars as well, and enginemen must not apply the air brake afterwards, without first signaling "Off Brakes."

The Automatic Quick Acting Brake, with the Old Style Automatic Brake, can be operated in trains, but it cannot be changed to straight air.

Conductors must report on a card, prepared for that purpose, the repairs which are needed to the brake apparatus in their trains. These cards must be handed on arrival at the end of their runs to the Yard Master or Chief Car Inspector, for immediate attention.

Adjustment.—The adjustment of the brake rigging on cars should be such, that, when brakes are fully applied, the piston will run out not less than 4 nor more than 8 inches.

Air Hose.—When not in use the hose *must* be coupled to the dummy coupling at the end of each car.

INSPECTORS.

Adjustment of Brakes.—Brake Levers should be so adjusted that pistons will not travel less than 4 inches nor more than 8 inches.

Slack in connections must be taken up by dead levers, but when in shop, by bottom connection.

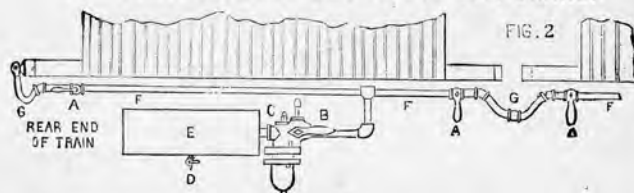
Crude Oil only, strained through cloth, gravity 28 to 32, is to be used in oiling brake cylinders and triple valves.

Brake Cylinders, Passenger and Freight, must be oiled every three months, using half gill of crude oil. Use a syringe of half gill capacity for this. Triple

valves should be cleaned once in four months and the date marked on auxiliary reservoir. Once per year, when in shop for repairs, front cylinder should be removed, leather piston packing examined and cylinder cleaned and oiled, and entire brake rigging overhauled, and date marked in white lead.

All piping should be without leaks and firmly secured to body of car. Loose piping will cause leaks.

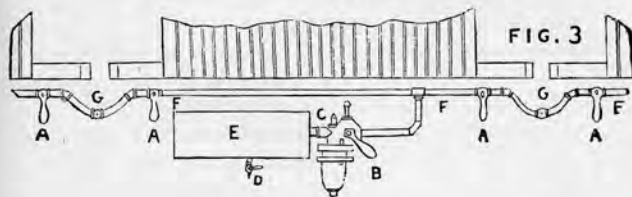
THE WESTINGHOUSE OLD AUTOMATIC BRAKE.



EXPLANATION.—A A, STOP COCKS IN MAIN BRAKE PIPE. B, FOUR-WAY COCK HANDLE. C, TRIPLE VALVE. D, RELEASE COCK IN AUXILIARY RESERVOIR. E, AUXILIARY RESERVOIR. F F, MAIN BRAKE PIPE. G G, HOSE AND COUPLINGS.

To Make Up A Train—Unite the couplings G and turn the handles A A vertical, (crosswise of pipe), except on rear end of last car, where the handle A must be turned to be in line with train pipe, and the hose coupled up with dummy coupling. Turn handles B and D horizontal (in line with train pipe) on entire train.

Air Shut off from Brakes on this Car.



EXPLANATION—A A, STOP COCK IN MAIN BRAKE PIPE. B, FOUR-WAY COCK HANDLE. C, TRIPLE VALVE. D, RELEASE COCK IN AUXILIARY RESERVOIR. E, AUXILIARY RESERVOIR. F F, MAIN BRAKE PIPE. G G, HOSE COUPLINGS.

To Cut off a Car or in Shifting a Train.—First, turn the handles A horizontal on each side of the coupling to be separated. Second, disconnect the couplings and unite them with their dummy couplings. The couplings must always be separated by hand.

To Release a Brake.—Turn the handle D vertical on passenger cars; on freight cars turn the handle B half way between a horizontal and vertical position.

Accidents to Brake Rigging.—When these occur, turn handle D vertical, then turn the handle B half way between a vertical and horizontal position, which will cut out the defective brakes, but allows air to pass through train pipe to other cars in the rear.

To Apply the Brakes from the Car.—This can be done in three ways, none of which should be used except in case of emergency :

First. By pulling down on the conductor's valve cord and holding it down until the train is stopped.

Second. By disconnecting the couplings.

Third. By turning the handle A on rear end of last car vertical.

Straight air must never be used.

Enginemen when making an emergency stop with a train equipped with the old brake, or with a train having both the old and the new brake, should turn the handle of the engineman's brake valve to position 5, and leave it there until the train line pressure has been reduced one-third, which is a full application.

