

Surplus Material

AND

Track Accounts

THE COLLECTION OF SCRAP AND SURPLUS ARTICLES,
AND AN EFFECTIVE METHOD FOR KEEPING
THE ACCOUNTS OF TRACK MATERIAL,
TOOLS, LABOR, ETC., AND MAK-
ING RETURNS THEREOF

SUPPLEMENT TO
"The Science of Railways"

17 Volumes

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MARSHALL MONROE KIRKMAN

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GUARDING A COMPANY'S PERSONAL PROPERTY AND
GATHERING UP THAT WHICH IS UNUSED, IN-
CLUDING SCRAP, SURPLUS TOOLS, MATERIAL
AND MISCELLANEOUS ARTICLES.

The care and disposition of railway track supplies (including tools) naturally suggests itself in connection with the reference to road accounts and returns elsewhere herein. More particularly, however, that feature relating to scrap and the surplus material and implements that accumulate on a road and that need constant and special attention. Against the surplus on one section there will be found more often than otherwise a lack of needed material and tools on another section. One does not, however, offset the other. Wherever a deficiency exists the foreman or person in charge, it is probable (unless under great restraint), will continue to call for what he needs until he gets it. In the case of a surplus, however, it may be allowed to accumulate and so remain a long time without effective effort being made to dispose of it. It is not in the way, and it may be needed sooner or later. Moreover, the foreman—or person in charge—is busy and the pressure on him to send in the surplus is spasmodic.

Nevertheless, he would give the subject more attention if he had more leisure. But his every hour is crowded to the full with important work. So that oftentimes nothing is done with scrap and surplus articles. What is the remedy for this? To issue a circular calling on everyone to send in his surplus? That would be an easy way if it accomplished the purpose; but it would not do this, except in part. Everybody is busy, and circulars are soon forgotten. Moreover, the collection of the surplus requires a searching examination. About everything has been tried to remedy the evil—and failed. It is a business in itself and the only way it can be accomplished is to send an auditor over the line. Not in a private car or on a freight train, but on a hand or motor-car in company with the superintendent or roadmaster. In this way he will overhaul every building and tool-house, not forgetting to look behind each; scrutinize every nook and corner, every foot of track and right of way; note every bit of scrap, every item of material, every tool, every implement, every piece of furniture.

Having in this way ascertained the surplus on the line, he will report the same to the general storekeeper, who will take immediate measures to have it sent to the storehouse most convenient for its sale or distribution when needed. Or, if any surplus article is withheld he will find out the reason therefor and insist upon compliance. It may not be easy in every case to get the surplus shipped. For the working forces of a road cannot always get supplies and tools promptly as

they need them, and so hold on with honest tenacity to any surplus they may have—this against a rainy day—against the times they will need the things they are asked to part with. So that it requires not only tact, but considerable energy and perseverance to secure the transmission of the surplus once it has been located. But its shipment should be insisted upon rigorously; even if there is some doubt as to its advisability. If this last is done we may hope that, in the course of time, particular pains will be exercised to send off any unneeded articles; and when this is not done that the futility of attempting to hold possession of the surplus after its discovery (coupled with the censure that attaches to the act), will lead everyone to act promptly and effectively in the emergency. Thus the duties of the auditor will be much simplified and the expense and worry of the general storekeeper's office be much lessened.*

In this way an efficient service will be slowly built up; and if the auditor of material and labor continues diligent in his work, it will be maintained thereafter with little difficulty, to the great and lasting good of the railroad interested.

I have referred above to the fact that while there may be a surplus at one point there may be a deficiency somewhere else. Thus, to illustrate, one section will be short of tools while

*In this connection, it is presupposed that the auditor, in his search for surplus material and tools, will take into consideration contemplated work as well as that being done at the moment of his examination.

another will have a surplus. The question has suggested itself more than once whether or not, in such cases, the surplus should not first be used to supply the deficiency, instead of its being sent to the storehouse. Thus, if a shovel is lacking on one section, while there is a surplus on another, would it not be good practice to have the deficiency supplied directly from this excess? Such disposition would, in any event, depend largely on the experience and good judgment of the auditor. On the whole, however, it seems best—as a practice—though exception might sometimes be made—to order the surplus to headquarters and let those immediately responsible for filling requisitions judge as to the need of supplying the deficiency. Deficiencies in supplies and tools, as claimed, may be real or may not; only a competent person can tell. If the auditor is such a person no harm can be done in leaving him to supply deficiencies from the surplus. Such direct measure would be economical as it would save one handling. Whatever the arrangement may be it should be wisely considered with the view to what is most economical and effective from the standpoint of a company.

In the way I have described, either by shipping all surplus to the storehouses or by using it so far as need be to supply deficiencies along the line, supplies and tools will be utilized to the fullest extent and extravagance and loss prevented. For every dollar's worth of surplus material; every unnecessary article—be it a lamp, stove, spade, or other thing of value, no matter what—is just so much unproductive cap-

ital. Not only that, but such property is in peculiar danger of being overlooked and forgotten, and so injured through exposure or neglect, or—in the case of light articles—stolen by the tramps that infest the lines and yards of railroads. Not being needed daily the surplus is not carefully looked after. I introduced the practice of employing special auditors to travel constantly to gather up the scrap and surplus articles. It was an experiment. But experience soon demonstrated its great value. For it at once became apparent that while no one purposely ordered more material than they needed, or kept back property—scrap, surplus articles, tools and material—intentionally, yet such was the case. It was found that those who used such things, being actively engaged in practical work, failed, in many cases, to take cognizance of the surplus and so let it lay. By sending a sharp-eyed man, of good judgment, over the road to take note of everything in and about the yards, buildings, storehouses and track, it became possible to locate the surplus and afterwards secure its shipment to the storehouses to be sold or added to the supplies in stock. Success in such methods will become easier each month, as it will be possible to secure more active co-operation upon the part of those interested. At first the practice may be looked upon as an interference; a questionable innovation, and excite in consequence considerable doubt.

In the progress of his work of inspection the auditor should make a record of the material and articles no longer in use, that may be spared. In

order to determine the latter, considerable care and circumspection will be necessary. Thus, in passing over a piece of road, to give an instance, he must note the condition of the fences in order to determine whether the amount of fence wire or lumber on hand is such as circumstances require. To cite a case in point illustrating the necessity of this; in one instance the auditor in going over a line, noted, as was his practice, the condition of the fences. Afterwards, figuring up the supply of wire on hand, to cover repairs, he discovered (and this was a great surprise to the storekeeper in charge) that there was enough wire on hand to build the fence anew. In other words, there was many times as much surplus material held to meet emergencies as was needed. A cursory examination would not have developed this; but the expert, having nothing on his mind save the auditing of the supplies along the road, and being skilled in his business, quickly detected the surplus.

Reference to the articles used by section men, named in the accompanying forms for keeping account of material and tools used in repairing roadway and track. renewals of rails, renewals of ties, repairs of fences, road-crossings, signs and cattle-guards, will illustrate the vast amount of material, and the great number of tools used in connection with work of this kind; supplies not only great in number and extent, but of immense value. This material (to say nothing of the vast amount in store at supply depots and elsewhere), scattered along a road and often in excess of needs, and in many cases without adequate facil-

ities for storing, abundantly emphasize the necessity of the auditor's work and the need that it should be continuous and painstaking.

The accumulation of surplus material, as I have intimated, will not be confined to any particular branch of the service. Wherever there is portable property; tools used, utensils, or a stock of material, there is likely to be scrap, if not a surplus in other directions. So that as the auditor traverses the line his duties will require him to look everywhere. The track is only a part of the whole. He will need to overhaul the paraphernalia as well as material of those who have to do with general stores; station and train supplies; tools and other things used in connection with bridges, buildings, fences, telegraph and other structures; the signal service, the interlocking plants, offices, baggage rooms, etc., etc. He will, in fact, need to scrutinize every nook and corner where there is material, tools or property of any description. In the most unlikely places he will find something to be collected and sent to the depots of supply to be kept for use or sold, as the case may be. Such accumulations are unavoidable. Those in charge see the surplus articles, it may be, every day; and yet do not see them. The property is not in the way and very likely petty, Anyway it is overlooked. This is not strange. These men's minds are intent upon their particular business. Indeed it may be that, if their attention is directed to it, its value and importance appear not worth the labor of handling, So it is left. Yet, in the aggregate, the property that thus accumulates, when collected for a whole

road, amounts to an immense supply in itself, and of great value and practical utility. For every article has a use or may be sold. But no one appreciates what these infinitesimal and widely scattered articles mean except the auditor and general storekeeper.

In connection with his other duties it will naturally fall to the auditor of material and labor to see that due diligence and care are exercised to protect the portable or personal property of a company—material, tools, utensils—both in use and not in use. Not that those in immediate charge will not be found faithful and diligent; but because this expert will effectively supplement their labors; for, as already stated, he has nothing on his mind except to attend to matters of this nature. With all others it is a mere incident and a very small one.

In order to make the greatest possible use of the auditor or inspector* he should be required not only to scrutinize the material and portable property, in use and not in use, along the line, but he should be required, so far as may be practicable, to ascertain by personal inspection on the ground, as to the care and intelligence exercised everywhere in keeping the time and making the pay rolls of those who work for the company. To note whether the time is kept systematically from hour to hour and day to day, or whether it is written up in gross at the end of the week or month—everyone being allowed the maximum sum. By such inspection an addi-

*A good title for this official is "Auditor of Material and Labor."

tional and valuable check will be secured on this great and widely scattered expenditure. Not only should the auditor assure himself, so far as he is able, that accuracy in keeping the time of employes is observed and in making the pay rolls, but also that the time is apportioned to the thing upon which the labor was expended. For it is not enough that the wages of men should be accurately kept; the management must know on what kind of work the men were engaged, so that the cost thereof may be determined. This is true of every department of the service.

If carelessness, inefficiency, or something worse is discovered in keeping the time of men, or in distributing it, the auditor will have it corrected, and this to the betterment of discipline if not actual saving in money.

By adding these duties to the others the value of the auditor's efficiency may be greatly increased.

From the foregoing it will be seen that the watchfulness and skill of the auditor of material and labor will throw a much needed safeguard around many important expenditures. And, to recapitulate, he should see that all surplus material (all portable property, such as material, tools, furniture, fixtures, etc., etc.) in storehouses and along the line of the road is reported to the general storekeeper, that the latter may direct its shipment to the storehouses of the company; that all material—portable property—in use and not in use, is carefully looked after and, so far as practicable, guarded from loss or damage; and finally that the time of employes is properly kept

and the accounts upon which the labor is expended, duly charged.

From all this it is apparent that the auditor of material and labor may be made one of the most valuable means the accounting officer—or whoever is in charge—has of exercising needed supervision over the vast disbursement accounts of a company for labor and supplies of every description.

A great deal may be done at headquarters in the way of keeping down the surplus and waste by promptly filling necessary requisitions. If there is any doubt about this being done operatives along the line will anticipate it by keeping articles against the time they need them—and may not be able to get them with promptness. If a section man needs a shovel there should be no doubt about his getting it promptly. He will not then be tempted to keep more than he needs. In this connection a very effective means of supplying the light articles for station, train and track service, is to send a car over the road monthly, in charge of a man, to deliver the needed supplies directly into the hands of those who are to use them. In this way agents and others have assurance that at a stated time they will get what they need. It is also a good means of exercising personal supervision over the matter. Thus, if a new ax, lantern or shovel is needed, the old one may be required to be delivered up in exchange—provided new needs have not occasioned the demand. The method of filling wants monthly, directly from a supply car,

permits not only careful supervisory work but may also be made, it will be seen, the means of collecting much of the surplus that accumulates. Supplying needed articles directly from a car, affords an opportunity for the messenger in charge to scrutinize conditions at the various places where the car stops. It thus tends to assure greater care in the use and guardianship of material. It is also economical in other ways. Thus it saves way-billing; the cost of packing and directing supplies; obviates embarrassing delays and losses in transit; avoids encumbering baggage cars; saves the time required in making and considering requisitions; permits needs and complaints to be considered on the spot. All these are material things in the economy of a company. The little articles that will be gathered up, in exchange for new, that would otherwise be lost—because having apparently no value—may in many cases, be repaired and utilized and so, as a whole, effect a saving proportionate to the extent of the road. In any event the production of the old articles, in exchange for the new, will prevent such supplies being lost through carelessness or stolen for lack of proper care.

In regard to those places where large supplies are kept, such as at storehouses and shops, it will facilitate matters if adequate measures are taken for classifying and storing scrap and other old material; and for keeping a record of the same afterwards. No one would think of passing a ten-cent piece lying on the ground; and yet we might pass over a piece of iron until it melts into the ground, that had twice the value. Receptacles

for scrap if waste is to be prevented, should also be provided on each section of a road, and at other places where values of this kind accumulate and are likely to be lost unless collected and watched over.

The keeping of a record of scrap and other old material as it accumulates (or, indeed, of any kind of surplus material) about shops and storehouses, is highly desirable. If this is done the matter will be brought daily, to the attention of the storekeeper, and so will not be overlooked or forgotten.

Where methods, such as those I have outlined above, are pursued for collecting surplus material, both old and new, immense quantities will thus be gathered under the keeping of the general storekeeper at the various supply depots. In the case of usable material, he will fill requisitions from such supplies—thus accumulated—and so avoid the need for going into the market to purchase new material. Appended hereto will be found a list of the more important articles of scrap that will accumulate on a road and which the general storekeeper will find it necessary to report at frequent intervals, to the proper officer for his disposition.

SCRAP.

A report in form similar to that below should be made monthly (or as often as required) by sub-storekeepers to the General Storekeeper, who will in turn summarize it in a report to the Sales Agent and other officials interested. It is a good practice, however, when a carload (or considerable quantity) of any particular kind of scrap has accumulated, to report it to the proper official at once, so that he may make immediate disposition of it if the interests of the company require. The scrap of a company, whether it consists of metal, or wood from bridges and buildings and other sources, requires to be carefully examined, that which is usable being separated from that which is not. In this connection it will be found a good plan to have a portion of every yard set apart for storing usable (old) bridge and building material. Scrap will require to be carefully classified with the view to get-

ting the highest price for the different kinds. In those cases where especial care is exercised in machinery and car departments it is made the duty of skilled men to scrutinize the scrap that accrues from the breaking up or repairing of locomotives and cars, with the view to putting aside that which is usable. Such material should be sent to the storehouse to meet requisitions as required, proper credit being given in the accounts, as, indeed, it should be given for every species of scrap or surplus article. Accumulations of railroads in the way of obsolete and outlawed records, reports, cancelled tickets and from other sources, are very great and of considerable value. The disposition of this, however, requires special and careful regulations to prevent that which is still necessary to a company from being sold with that which is no longer of use.

Quantity	KIND OF SCRAP.	Quantity	KIND OF SCRAP.
	Angle Bars and Splices.		Pipe, Wrought Iron.
	Ashes, Brass.		Plates, Frog.
	Axles, (Car and Engine.)		Punchings, Iron.
	Axles, (Old Driving)		" " and Steel.
	Bagging, old.		Rags and Upholstery Scrap.
	Barrels, good Kerosene.		Rail Iron Scrap.
	" " Black Oil.		" Steel " under 3 ft.
	" " Signal Oil.		" " 5 ft. and under.
	" one headed.		Rail Steel Scrap, 5 ft. and over.
	Boilers, old.		Rail Steel, (Frog and Guard)
	Bolts, Nuts and Spikes.		Rope, old.
	Books, old Scrap.		" " Tarred.
	Borings, Cast and Wrought.		" " Wire.
	" Clean Cast Iron.		Rubber Springs.
	Brass Scrap,		" Hose.
	" Turnings and Borings.		Safes, old.
	Bumpers, Wrought.		Steel, Cast.
	Bumpers, Cast, Wro't and Wood (bolted together)		" " Brake Shoes.
	Copper.		" " Frog Points.
	" Flues, Cleaned.		" Crank Pin.
	Carboys.		" Firebox.
	Drillings, Greasy, Wrought.		" " and Boiler.
	Files.		" Light Sheet.
	Flues, Iron.		" Spring, Heavy Coil
	Glass, broken.		Spiral.
	Hoops, Barrel.		" Spring, Light Coil
	Iron, Angle.		Spiral.
	" Boiler.		" Spring, (Flat.)
	" Burnt Wrought.		" Tires.
	" Cast.		" Tool.
	" Cast and Wrought, (bolted together.)		Splinters and Clippings, Rail, Iron and Steel.
	" Cast, Burnt.		Stay Bolts, Punchings and Rivets.
	" Light Sheet and Steel, mixed.		Tickets, Paste-Board, (cut up.)
	" Wrought and Steel, mixed.		Turnings, Axle.
	" Malleable.		" Country, mixed.
	" Tank.		" Iron. Wrought, clean.
	" No. 1 Wrought.		" Steel, clean.
	" 2		" and Borings, greasy.
	Lead, Sheet and Pipes.		Wire.
	Leather, Scrap, new.		Wheels, Car and Engine.
	Matting, old.		Zinc, Sheet.
	Netting, Brass Wire.		
	Paper, old.		
	" Tissue.		

TRACK ACCOUNTS AND RETURNS.

In reference to the Material and Labor Accounts and Returns of section foremen and others having to do with the track, it is to be said that there are no accounts or returns connected with railroads so difficult to formulate satisfactorily as these. The men in charge have not the clerical skill nor the facilities for performing such duties. They have no offices, often not even pen and ink. The consequence is if they have elaborate reports to make as is the case on some roads—they must go to the station agent for clerical help; or, in many cases, the foreman must get his wife to aid him. The writing and figuring is complicated and delicate and he has neither the acquirements nor the time to spare.

It results from these difficulties that oftentimes there is practically no effort made by railroads to secure accurate returns in regard to track labor or material. This because the railroads in question do not believe it practicable to keep trustworthy accounts of track work or the different articles of material that the section foreman handles from day to day and month to month. The result is the companies practically charge the material direct to the various operating, construction and other accounts as fast as it is sent to the section.

And of the labor performed, little or no subdivision is attempted; the whole being charged to particular accounts in gross.

Such imperfect and extravagant methods are, of course, objectionable because the outlay for labor is great, and the value of the material in the hands of section foremen enormous. So great as to require that it should be accurately accounted for, and should not be charged to construction or operation except as it is actually accounted for; any more than material in the general storehouse, or other outlays of a company should be charged without knowing the facts.

And in the case of labor, what each man has been doing from day to day should be shown, for in no other way can intelligent account be kept of cost.

The difficulty is to devise a system of Forms for section foremen for handling labor and material accounts that is within their clerical facilities; that will yet give—in the case of material—an accurate account of supplies received, acquired, on hand, shipped and used (and for what used); that will afford the accounting officers at headquarters sufficient information for compiling their accounts and writing up the books. These records and forms must be so easily understood that any foreman who reads and writes can understand them and fill them up properly and easily; they must also be so thorough that they will take up the material in its appropriate place without omission, or confusing or intermingling distinct accounts; they must be so conclusive that those at headquarters (including the oper-

ating officials) will be able to ascertain the particulars of each account, and such other information in regard to supplies acquired (no matter how), on hand, shipped and used as is necessary to a clear understanding of the situation.

Thus, if a section foreman orders material, the official whose duty it is to pass upon the same, must be able to determine from the returns on file—made by the section foreman—whether he needs such material or not; whether he has not material that can be made to answer the purpose required. And, if not, whether other section foremen have not a surplus that can be diverted to cover the requisition in question. And so in regard to unused material and scrap on hand; the record of such material must be so full and explicit that those supervising the work at headquarters will be able to know from each section foreman's return whether he is keeping his section free from the accumulation of scrap and other surplus and unneeded material.

And in reference to material charged to various accounts, the return must be specific, item by item, so that each disbursement can be properly scrutinized and accounted for.

All these things, to be satisfactorily accomplished, require accuracy in the returns, and to secure that, the clerical work of the foreman must be of the simplest nature.

Now, how can forms be devised and arranged so as to do this; so as to enable the section foreman to sit down in his tool-house and write up the returns accurately, intelligently and fully? To meet this requirement (so absolutely neces-

sary in connection with track accounts) more or less effort has been exercised on every railroad. But yet without accomplishing fully what is needed without going outside of the section foremen; without seeking clerical assistance elsewhere. Either no returns of a substantial nature have been required by railroads of section foremen; or, going to the other extreme, the returns have been made so elaborate that a clerk must be kept, or outside aid sought to write them up from day to day or month to month.

To meet the practical requirements of the situation (requirements that the vast cost of track expenditure justifies and imperatively demands) something at once simple, full and comprehensive is needed. And it is this requirement that the accompanying forms are intended in a measure to supply. They are so easily understood and so simple, that a section foreman can fill them up without difficulty, with a lead pencil; and this in so short a period of time each day as not to interfere perceptibly with his other and more important duties. And what is desirable (for writing up the books) they will afford the accountants at headquarters and elsewhere the information they require in order to prepare the necessary entries for the general ledger and other records, viz.: the value of material on hand and the cost of material and labor expended, and to what it should be charged, etc., etc. Moreover, those interested will be able to ascertain from the returns just what articles of material are on hand, new, usable, or scrap, and their value. It will also be seen from the re-

turns what material the section foreman received during the month, so that he may be charged therewith; what he has acquired in the way of accumulated scrap or otherwise, on his own section or from abroad, so that he may be charged with the value thereof. Also what he has sent to other sections, storehouses or elsewhere.

In fact, the accompanying forms are designed to afford every species of information that is necessary to enable officials at headquarters to keep track of the material on the various divisions of a road. The blanks are to the point, avoiding every species of work that can be saved the foreman, and yet embodying the information needed at headquarters, the whole compiled in so simple and direct a form that the section foreman cannot go astray.

The object sought is to require of the section foreman only essential things, and leave it to the accounting officials and others at headquarters to finish the record and figure the cost and other details for entry on the books of a company.

It is to be remembered in this connection that if section foremen could be provided with desks and writing facilities, and possess sufficient clerical ability to compile the returns fully, it would be an extravagant waste to require such work of them, for their place is on the line of the road with their men, just as the place of the conductor is on his train.

In reference to the articles of material inserted in the accompanying returns they are merely conventional. Each company can insert such articles as its particular need demands.

In regard to handling the labor accounts for work performed by section foremen and others, there has been great difficulty experienced, not only in accurately ascertaining how much time each man works, but the class of work he has been engaged upon. The accompanying form of "Section Foreman's Time Book" very clearly shows both. It has been in use many years, but has been amended from time to time, as experience and new things suggested improvement. The main point in connection with it—as in the case of material—is that every section foreman can keep the account of work performed, and what it was performed on, with ease and little labor, leaving it to the accountants at headquarters to determine the cost and sum up the total.

By reference to this time book it will be seen that the labor of section men can be apportioned to all the various operating, construction and other accounts that come within the compass of their duties, and this with such easy facility that any section foreman can perform the clerical work accurately, and with so little time that it will take nothing practically from his daily duties. Thus, when the day is over, he will set down opposite the name of each man the total number of hours he has worked, and opposite that, under appropriate columns provided therefor, how many hours are chargeable to each of the various operating, construction or other accounts upon which the man has been engaged. Nothing could be more simple or more comprehensive.

In this way the same easy and yet comprehensive method of accounting is accomplished in

connection with labor that is provided elsewhere herein for keeping account of material. There is nothing for the section foremen to do, in either case, except to set down the quantities in the places provided. Or, if there are exceptions, they are slight and unimportant.

In regard to the "Section Foreman's Time Book," it will be noticed that it affords the data necessary for making the pay-roll at headquarters and writing up the books; just as the material returns afford the data required there for writing up the records and general books of a company.

In addition to the material and labor returns that section foremen must make, other returns that the exigencies of the service require from them are also embodied herein for the information of those interested in such matters. These returns are intended to utilize the knowledge of section foremen in the current operations of a road.

Of the need and great value to a railway company of accurate statistics showing the comparative cost per mile of track for material and labor on different divisions and subdivisions there can be no manner of doubt. In furtherance of this, so far as labor is concerned, the table contained herein (the last of the series) designated "Monthly Compilation of Track Labor for the Information of Operating Officers," has been prepared especially to meet this requirement. By turning to it the reader will be able to understand its purpose more clearly than I can explain it here. Its

greatest value, however, is in this, that it shows the relative cost per mile—and otherwise—for such subdivisions of a road as the management thereof may elect. Indeed, the cost on each section may be shown side by side if it is desired to be minute. From the information thus gleaned the management is able to see who operates his section, subdivision, or division with the least outlay, and wherein the economy is exercised—a thing all important.

Statistics of a comparative nature, along the same lines, are useful in connection with track material; and more especially the tools and appliances used. Such statistics should show the number of tools and appliances of each kind used on each section or division, and the average expenditure in this direction per mile of road on each section or division.

With this preliminary explanation, I will take up the track returns and statistics in their order.

RULES AND REGULATIONS FOR USE OF SECTION FORE-
MEN IN MAKING RETURNS FOR
TRACK MATERIAL.

The blanks that immediately follow these suggestions are designed for the use of section foremen in entering, distributing and keeping a record of track material. They are intended to be kept in accordance with the following rules and regulations.

They must be written up and forwarded promptly on the evening of the last day of the month to the Roadmaster, who will examine and certify to their correctness and forward them without delay to the Division Storekeeper to be included in his distribution of material for the month.

MATERIAL ON HAND LAST REPORT: In this column in the proper blanks should be entered all material shown on hand at the close of the previous month.

MATERIAL RECEIVED BY SECTION FOREMAN DURING MONTH: On Form 1 should be entered in detail all material received during the month; and at the close of the month the gross amount of each kind of material should be carried to the "Received" column in the blank intended to cover the use to be made of such article or material. These forms are as follows:

- Form 3. "Repairs of Roadway and Track."
- Form 4. "Renewals of Rails."
- Form 5. "Renewals of Ties."

Form 6. "Repairs of Fences, Road Crossings, Signs and Cattle Guards."

Form 7. "Miscellaneous Material."

MATERIAL FORWARDED BY SECTION FOREMAN DURING MONTH: On form 2 should be entered in detail all shipments of material made during the month and at the close of the month the total amount of each article or class of material should be carried to the "Forwarded" column in the form on which the material or article has been kept.

MATERIAL USED: Section foremen should enter in this column in each form at the close of the month the total amount of material used for the purpose stated during the month.

MISCELLANEOUS MATERIAL: This form is intended to include items of material on hand at the end of the month not properly embraced in the other forms. The articles brought forward from the preceding month are to be entered first, after that will follow the miscellaneous material received during the month still on hand.

MATERIAL USED FOR OTHER PURPOSES: On Form 8 should be entered in detail all material used not covered by the various other blanks embodied herein, during the month, specifying the account to be charged and the amount. In entering material for "Repairs of Bridges and Culverts" or "Repairs of Buildings," etc., give bridge number or name of structure in every case.

REPORT OF MATERIAL USED IN THE CONSTRUCTION OF SIDE-TRACKS: Form 9 is to be used for making a return of material used in the construction or extension of Side-tracks. (NOTE-The

total amount of each article or class of material used will be carried to the "Used for Construction of Side-tracks" column in the forms on which the material or articles have been kept.)

REPORT OF MATERIAL FROM SIDE-TRACKS TAKEN UP: Form 10 is to be used for making a return of material acquired from side-tracks taken up. This material will be entered on Form 1 and reported the same as other material received during the month.

BALANCE MATERIAL ON HAND: In this column in the various forms should be entered the total amount of material on hand at close of month. This must agree with the "Amount on Hand Last Report" after adding the amount "Received" during current month and deducting the total amount forwarded, used, etc. Care must be taken to see that the total amount as shown in the several columns "Forwarded," "Used," etc., is deducted before entering "Balance on Hand." This last must agree with the actual amount of material on hand.

"REPAIRS OF ROADWAY AND TRACK."

Track Form 3.

This blank is intended to embrace an account of track material—as per articles specified herein—according to the various headings. All charges for material for "Repairs of Roadway and Track" are to be embraced in this return.

ARTICLES	On Hand Last Report		Received		Forwarded		USED				Balance on Hand		
	Usable	Scrap	Usable	Scrap	Usable	Scrap	For Construction of Side Tracks		Used for Other Purposes		New	Usable	
							New	Scrap	New	Usable			
Angle Bars, 90-lb.....													
" " 80 " 													
" " 72 65 60 56 L. P.....													
" " 72 S. P.....													
" " 65 60 56 S. P.....													
" " Compromise.....													
Mall. Step Chairs, 90 to 60 and 65-lb.....													
" " 80 to 72-lb.....													
" " 72 to 60 " 													
" " 60 to 50 " 													
Base Plates, 90-lb.....													
" " 80 " 													
" " 72 " 													
" " Compromise.....													
Bolts, Track, $\frac{3}{8}$ -in.....													
Frogs, Spring, 90-lb, R. H., No. 10.....													
" " L. H., No. 10.....													
" " R. H., No. 10.....													
" " L. H., No. 10.....													
" " R. H., No. 10.....													
" " L. H., No. 10.....													
" " R. H., No. 10.....													
" " L. H., No. 10.....													
" " Rigid, 90 " No. 8.....													
" " 90 " No. 8.....													
" " 90 " No. 10.....													
" " 80 " No. 10.....													
" " 80 " No. 8.....													
" " 80 " No. 8.....													
" " 72 " No. 10.....													
" " 72 " No. 8.....													
" " 72 " 9°.....													
" " 72 " No. 10.....													
" " 60 " No. 10.....													
" " 80 " No. 8.....													
" " 80 " 9°.....													
" " 80 " 													
" " Special.....													
" " Single Slip Centre.....													

AND TRACK ACCOUNTS.

Track Form 4.
 "RENEWALS OF RAILS."
 This blank is intended to embrace an account of track material—as per articles specified herein—according to the various headings. All charges for material for "Renewals of Rails" are to be embraced in this return.

ARTICLES	On hand last Report	Received	Forwarded	USED			Balance on Hand
				Charge-able to "Renewals of Rails"	For Construct'n of Side Tracks	Used for other purposes	
Steel.....90-lb.	New..... Re-rolled..... Usable (main track)..... Usable (side track)..... Scrap.....						
Steel.....80-lb.	New..... Re-rolled..... Usable (main track)..... Usable (side track)..... Scrap.....						
Steel.....72-lb.	New..... Re-rolled..... Usable (main track)..... Usable (side track)..... Scrap.....						
Steel.....65-lb.	New..... Re-rolled..... Usable (main track)..... Usable (side track)..... Scrap.....						
Steel.....60-lb.	New..... Re-rolled..... Usable (main track)..... Usable (side track)..... Scrap.....						
Steel.....lb.	New..... Re-rolled..... Usable (main track)..... Usable (side track)..... Scrap.....						
Steel.....lb.	New..... Re-rolled..... Usable (main track)..... Usable (side track)..... Scrap.....						
Iron.....60-lb.	New..... Usable (main track)..... Usable (side track)..... Scrap.....						
Iron.....lb.	New..... Usable (main track)..... Usable (side track)..... Scrap.....						
Iron.....lb.	New..... Usable (main track)..... Usable (side track)..... Scrap.....						

AND TRACK ACCOUNTS.

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Track Form 8.

MATERIAL USED FOR OTHER PURPOSES.

There is to be entered in detail on this form all material used except for "Repairs of Roadway and Track," "Renewals of Rails," "Renewals of Ties," "Repairs of Fences, Road Crossings, Signs and Cattle Guards," and "Construction of Side Tracks." This form is intended to cover disbursements of material for operating, construction and other accounts not covered by Forms 3, 4, 5, 6, 9 and 10. The name of the account must precede the items in each instance, as say "Repairs Telegraph," and so on. The name of structure should also be given in every case. The material covered by this form is reported as Received on the other blanks.

WHAT USED FOR	DESCRIPTION OF ARTICLES.	Quantity used	
		New	Old

SURPLUS MATERIAL

Track Form 9

REPORT OF MATERIAL USED IN THE CONSTRUCTION OF SIDE TRACKS.

At.....on.....Div., month of.....19.....

Total length of track (from switch point to switch point) laid..... Feet

Use to be made of track.....

NOTE: A separate report must be made by the Section Foreman for each side track laid or extended.

DESCRIPTION OF MATERIAL.	Quantity		Price	Amount				
	New	Usable						
Bars, Angle.....Length.....Pat. Weight.....								
Bars, " Compromise.. " .. " .. " ..								
Bars, " Combination.. " .. " .. " ..								
Bars, " Expansion..... " .. " .. " ..								
Base Plates..... " .. " ..								
Step Chairs..... " .. " ..								
Tie Plates..... " .. " ..								
Rail Braces.....								
Track Bolts.....Size.....								
Track Spikes.....Size.....								
Boat Spikes.....Size.....								
Nut Locks.....								
Frogs, Kind.....No.....Length.....Pat. Weight.....								
Switches, Split, Complete.. " .. " ..								
Slip Switch Points..... " .. " ..								
" " Tumbling Rods.....								
" " Connecting Rods.....								
" " No. 1 Rod Adjustable.....								
" " Bell Crank.....								
" " Tumbling Rod Guide.....								
" " Levers.....								
" " Slide Plates.....								
Switch Stands...Kind.....								
Switch Stand Connecting Rods.....								
Head Chairs, Single or Double.....Pat. Weight.....								
Wood Foot Guards, Frog.....No.....								
" " " Switch.....No.....								
" " " Guard Rails.....No.....								
Cross Ties, 6-inch, Kind of Wood.....								
" " 7-inch, " " " .. " ..								
" " Culls " " " .. " ..								
Switch Ties 6 in. x 8 in.	8 ft	9 ft	10 ft	11 ft	12 ft	13 ft	14 ft	15 ft
Number.....								
Kind of Wood.....								
Head Blocks...Size and Kind of Wood.....								
Crossing Plank.....								
Feet Steel Rail, New.....Pat. Weight.....Maker.....Year.....								
" " " Rerolled.. " .. " .. " ..								
" " " Usable.. " .. " .. " ..								
Feet Iron Rail, " " " .. " ..								

(For cost of labor see Section Foreman's Time Book.)

Date Commenced.....19.....

Date Completed.....19.....

Section No.....

Foreman.

Correct.....Road Master.

Order No.....

RULES AND REGULATIONS FOR USE OF TRACK FORE-
MEN AND OTHERS IN KEEPING TIME AND
DISTRIBUTING TRACK LABOR AND
MAKING RETURN THEREOF.

The following instructions are designed to govern section foremen in keeping the time of track men and in distributing wages to the accounts on which the work is performed, as set forth in the blank form (Time Book) that follows these directions.

TIME TO BE POSTED DAILY.

The total number of hours worked should be entered in the time book in the first column headed, "Total time worked." Following this are columns for distributing the labor under the different headings, and track foremen should enter under such headings the number of hours chargeable to each, as follows:

"REPAIRS OF ROADWAY AND TRACK."

Laying Rails.—Enter time used in taking up and disposing of rails from track, and replacing same with other rails, and loading the old rails to be sent away.

Laying Ties.—Enter time used in taking up and disposing of old ties and unloading, handling and laying new ties to replace those taken up.

General Repairs of Track.—Enter under this head time consumed in cutting and repairing rails, repairing side-tracks, taking up old sidings,

inspecting track, cleaing out pipe culverts and similar work.

Ballasting.—Enter the time consumed in repairing ballast so as to put the track in as good order as when originally ballasted. Such work is generally termed surfacing.

Filling Bridges and Culverts.—Enter all time consumed in filling bridges, trestles and culverts.

Cleaning out Ditches.—Enter time consumed in opening and clearing ditches, to render them as good as when first made.

Clearing Track of Snow and Cutting Weeds.—This includes clearing snow, weeds, brush and grass from the track, and mowing and burning weeds, brush and grass.

Track Watchmen.—Enter time of men engaged as watchmen and flagmen while repairs of track are in progress, when rendered necessary by such repairs.

Freshet Repairs.—Enter the time consumed in repairing damages to Roadway and Track caused by freshets.

“REPAIRS OF INTERLOCKING PLANTS.”

Enter time consumed in repairing interlocking plants, including tower buildings and signals, and switches operated by the plant.

“REPAIRS OF BLOCK SIGNALS.”

Enter time consumed in repairing train order, distant and block signals.

“REPAIRS OF BRIDGES AND CULVERTS.”

General Repairs of Bridges and Culverts.—Enter time consumed in repairing bridges and cul-

verts; also time of men engaged as watchmen and flagmen while repairs of bridges and culverts are in progress and rendered necessary by such repairs.

Bridge Watchmen.—Enter time of bridge watchmen who are regularly employed as such, and not required on account of some special repairs being made.

“REPAIRS OF FENCES, ROAD CROSSINGS, SIGNS AND CATTLE GUARDS.”

Enter time consumed in repairing fences, road crossings, signs and cattle guards, or rebuilding them if necessary to do so, in order to render them as good as when originally built.

“FLAGMEN.”

Enter time of men engaged as flagmen at crossings.

“CLEARING WRECKS.”

Enter time of men employed in clearing up wrecked cars or locomotives, including all time consumed in reloading cars, transferring passengers and baggage, or other necessary work resulting from a wreck, such as building temporary tracks around wrecks, etc. The cost of repairing damages to the track caused by a wreck should be charged to “Repairs of Roadway and Track.”

“LABORERS AT STATIONS.”

Enter all time assisting station agent, loading or unloading freight, unloading coal when for station use, cleaning or caring for stations and station grounds, cleaning stock yards, and caring

for switch lamps. (Give name of station in each instance and kind of work done.)

"MAINTAINING TELEGRAPH."

Enter all time repairing or looking after telegraph and telephone lines.

UNLOADING COAL INTO STORAGE.

Enter all time unloading coal from cars into coal houses when same is to be stored for future use on locomotives.

UNLOADING WOOD INTO STORAGE.

Enter all time loading and unloading wood from and into cars when same is for company's use.

"FUEL FOR LOCOMOTIVES."

Enter all time consumed in filling coal buckets or chutes when the coal is to be used on locomotives.

LOADING CINDERS AT CINDER PITS.

Enter all time consumed in loading cinders at cinder pits, no matter for what purpose same are to be used.

CONSTRUCTION.

Under this head enter all time consumed in entirely new work. Even though the work is small, if it is an additional piece of work enter it in Construction. If a crossing is lengthened say one or six feet, charge the cost of the additional length to Construction. If an additional cattle guard is put in, make the charge for it to Construction. If an additional box drain is put

in where there was no old one, it should be charged to Construction. Any work which increases the value of the property is a proper charge to Construction.

Ballasting.—Enter time consumed in ballasting track when the work is in the direct nature of an improvement. For example, when stone ballast is put in replacing sand ballast, or where any ballast is applied where none before existed.

Rectifying Grades.—Enter all time consumed in cutting down grades or filling sags.

Widening Embankments and Cuts.—Enter all time on account of widening embankments and cuts.

Ditching.—Enter all time consumed in making new ditches, laying new tile, or otherwise improving the drainage.

Fences.—Enter all time consumed in building additional right-of-way fences. When a fence is improved by adding more wires or more posts the cost of the improvement should be charged to Construction.

Road Crossings and Signs.—Enter all time consumed in putting in additional road crossings, signs and cattle guards; also any labor spent in improving a crossing in such a way as making it longer than it was at first, etc.

Telegraph.—Enter all time consumed in putting up additional telegraph or telephone lines, charging this account with the expense of additional wires.

Side Tracks.—Enter all time consumed in putting in new side tracks, including cost of laying rails, ties, putting in switches and all ex-

penses attached to the laying of a new siding. Enter time in column headed "Ballasting," "Grading," "Track-laying," according to nature of work. In column headed "Remarks" give location of each siding and number of order covering the work.

Block Signals.—Enter all time consumed in putting in additional block and train order signals.

Interlocking Plants.—Enter all time consumed in putting in additional interlocking switches and tower buildings connected therewith; also cost of all additions to existing plants.

Tunnels.—Enter all time on account of construction of new tunnels, or enlarging or improving old ones.

BLANK COLUMNS.

These columns are designed for use as work not otherwise provided for requires.

The time of track foremen, conductors of gravel trains and foremen of gravel pits, should be distributed herein each day in the same manner as laborers.

Enter the distribution of labor in this book in a plain, legible manner at the close of each day's work, and oftener when necessary. At the close of the month add up each column and enter the footings at the bottom of the column, opposite the word "Totals," being careful to see that the footings of all the distribution columns (when added together) agree with the footings of the column headed "Total Time Worked."

On the evening of the last day of the month the foreman should certify to the correctness of the book and forward it immediately to the roadmaster, who will also certify to it and forward it at once to the division superintendent for use in making the pay-roll.

By _____ This is a leaf from time book of section foreman and is intended to embrace time and occupation of the workman named above for the month stated.

DATE	Total Time Worked	Chargeable to "Repairs of Roadway and Track"																				
		Laying Rails	Laying Ties	General Repairs of Track	Ballasting	Filling Bridges and Culverts	Cleaning out Ditches	Clearing Track of Snow and Cutting Weeds	Track Watchmen	Freshet Repairs	"Repairs of Interlocking Plants"	"Repairs of Block Signals"	General Repairs of Bridges and Culverts	Bridge Watchmen	"Repairs of Fences, Road Crossings, Signs and Cattle Guards"	"Flagmen"	"Clearing Wrecks"	"Laborers at Stations"	"Maintaining Telegraph"	Unloading Coal into Storage	Unloading Wood into Storage	
1																						
31																						
Total																						
Nc. of																						
Hours																						
Total																						
Wages																						

MONTH OF _____ Rate _____ Per _____
 Kind of labor _____

"Fuel for Locomotives"		CHARGEABLE TO CONSTRUCTION													REMARKS							
Loading Chiders at Cinder Pits		Chargeable to "Side Tracks"			Telegraph	Road Crossings and Signs	Fences	Ditching	Widening km-bankments and Cuts	Rectifying Grades	Ballasting	Ballasting	Grading	Track Laying		Block Signals	Interlocking Plants	Tunnels				

AND TRACK ACCOUNTS.

Track Form 13.

CONDUCTORS' REPORT OF WORK TRAINS.

NOTE—This form is to be used by Conductors of Work Trains, and they will state fully under the heading "Nature of Work Performed," the kind of work and for what purpose, so that the proper account can be charged with the cost and other particulars known to those concerned.

..... Station,..... 190...

Miles run.....

Hours worked.....

Conductor..... hours at..... amount.....

Brakeman..... " "..... ".....

Engineer..... " "..... ".....

Fireman..... " "..... ".....

Watchman..... " "..... ".....

Labor coaling engines..... ".....

Coal..... tons at..... ".....

Oil..... pints at..... ".....

Oil..... " "..... ".....

..... ".....

Total.....

Nature of work performed.....

.....

.....

No. cars..... hauled.....

" "..... unloaded between.....

.....

Average cost per car.....

..... Conductor.

DISPOSITION OF
SECTION FOREMEN'S ACCOUNTS.

When the foregoing returns of Section Foremen reach headquarters, the information they contain that is required for writing up the general books, is compiled by the accountants for the whole road, or for different divisions thereof, as may be required.

Thus the Material that has been received (through the Purchasing Agent or from other sources), must be shown in detail so that it may be compared with the amount charged by the Purchasing Agent and others, and the whole audited and placed upon the books to the debit and credit of those concerned. For in bookkeeping it must be remembered, there can be no debit without a corresponding credit and *vice versa*.

The scrap that has accumulated must also be taken up and similarly accounted for, so that it may be charged to "Material on Hand" and the proper account or accounts duly credited.

A statement must also be made of Material forwarded, and to whom forwarded, so that those to whom it is sent may be properly charged and the sender credited therewith.

Thus the material should all be accounted for and disposed of on the books.

Beside this, the compiler of the Section Foremen's returns must also prepare statements for the general books of the Material and Labor expended upon Operating, Construction and other accounts. Thus the amount chargeable to "Repairs of Roadway and Track," "Renewals of Rails," "Renewals of Ties," "Repairs of Bridges and Culverts," "Repairs of Fences, Road Crossings, Signs and Cattle Guards," "Construction of Side-Tracks," and all other general and specific accounts, must be given separately to be spread upon the records.

The form in which these Summarizations of Section Foremen's returns is given, varies on different roads, and it is not material what the form is so that the information is full and correct and such as to permit of a proper audit of the accounts and a clear understanding of them by the Accounting Officer.

Track Form 14.

SECTION FOREMAN'S REQUISITION FOR MATERIAL.

No. _____

_____ 190_____

Please send without delay MATERIAL called for below.

To _____ at _____

Approved: (Signed) _____ Section Foreman. Section No. _____

(Signed) _____ Road Master.

QUANTITY	ARTICLES	REMARKS

INVOICE OF MATERIAL.

Forwarded from.....
 for.....
 at.....
 on account of request No.....shipped
 in.....car, number.....;
 chargeable to.....

NOTE: An invoice is required to accompany or precede all supplies purchased or shipped from any storehouse or other place.
 The person to whom the material is consigned must examine it immediately upon its arrival, and in the event of error or omission, or in case there is any variation or deficiency either as regards quality or quantity, the subjoined account must be corrected accordingly. As soon as the articles are received, this invoice must be receipted and returned to the office from whence it came.

Date of Shipment	Description of Articles	Quantity	Price	Amount

Received the above this day:

.....190...

Storekeeper.

.....
 Storekeeper.

SURPLUS MATERIAL

Track Form 16

STOREKEEPER'S INVENTORY OF TRACK MATERIAL ON HAND.

On.....Division, on the last day of.....190.....

NOTE—An inventory is to be taken by the Division Storekeeper at the end of the fiscal (company's) year or at such other time, or times, as may be specifically required. The articles to be printed or written in this blank are the same as those given elsewhere in connection with forms 3, 4, 5, 6 and 7 from which this inventory is to be written up.

ARTICLES	QUANTITY			PRICE	AMOUNT
	New	Usable	Scrap		

AND TRACK ACCOUNTS.

Track Form 17.

SECTION FOREMAN'S REPORT OF STEEL RAILS LAID IN MAIN TRACK.

On the Division During the Month of 190.....

NOTE:—This report is made by the Section Foreman as soon as the work is completed.

LOCATION						Single or Double Track.	Lineal Feet of Track Laid in Main Line	Lineal Feet of Rail Laid in Leads
Commen- ing	North, South, East or West	Of Mile Post	Ending	North, South, East or West	Of Mile Post	Between What Stations	Single or Double— North, South, East or West Trk	None
400 Ft.	West	60	240 Ft.	East	61	Como and Pratt	Single	4640

DESCRIPTION OF RAIL LAID			QUANTITY LAID		RAIL TAKEN UP				Remarks
Name of Maker	Year Rolled	Weight per Yard	Tons	Pounds	Lineal Feet of Track	Name of Maker	Year Rolled	Weight per Yard	
USS	1903	90	124	640	4640	I. S. Co.	1885	72	Steel

NOTE:—On lines where there are no mile posts, give distances beyond stations in the direction which mileage would increase if posts were set.

Correct.....Section Foreman, Sec. No. Road Master.

Track Form 19. STOREKEEPER'S STATEMENT OF RAILS ON HAND (not in track) on.....Division,

On the Last Day of.....-190.....

NOTE:—A return similar to this may be made for Ties and other Classes of Material.

	No. of Lineal Feet	NUMBER OF TONS OF EACH CLASS OF METAL.						Miscellaneous
		90 Lbs. per Yard	80 Lbs. per Yard	72 Lbs. per Yard	65 Lbs. per Yard	60 Lbs. per Yard	56 Lbs. per Yard	
New Steel Rails.....								
Usable " "								
Scrap " "								
New Iron Rails.....								
Usable " "								
Scrap " "								

RAILS BELONGING TO CONSTRUCTION DEPARTMENT.

	No. of Lineal Feet	NUMBER OF TONS OF EACH CLASS OF METAL.						Miscellaneous
		90 Lbs. per Yard	80 Lbs. per Yard	72 Lbs. per Yard	65 Lbs. per Yard	60 Lbs. per Yard	56 Lbs. per Yard	
New Steel Rails.....								
Usable " "								
New Iron Rails.....								
Usable " "								

This report is made monthly by Division Storekeepers having charge of rails. It should embrace all rails on hand on the last day of the month, including rails at the various mills, or going to or coming from such mills, and belonging to the respective divisions or storehouses. It should also include, as far as possible, rails en route to the various divisions or storehouses on the last day of the month. The Lineal feet of Scrap is not required to be given.

SIGNATURE.....

Track Form 20.

SECTION FOREMAN'S PRELIMINARY REPORT OF
DAMAGE TO PROPERTY BY FIRE

.....Station.....190.....

TO THE MASTER MECHANIC:

.....Station.

Engine No.....hauling train No..... set fire.....

miles.....of.....Station, on the.....day

of.....190.....at.....o'clock.....M. The fire

seemed to come from the SMOKE STACK or ASH PAN.*

This engine set.....fires on my Section that day.

.....Foreman Sec. No.....

* If from ash pan run your pencil through the other, etc.

NOTE: When a fire is discovered by a sectionman, which appears to have been started by an engine, notice should be given immediately on the above blank, to the nearest Master Mechanic or Roundhouse Foreman, who will have the engine promptly inspected and report condition of same to the General Officer in charge of Claims, said report to be accompanied with this notice.

Track Form 21.

SECTION FOREMAN'S REPORT OF DAMAGE TO PROPERTY BY FIRE.

Section Foremen will make a report on this bank of all fires started by this Company, which do any damages, answering each question fully, and return it promptly to the Division Roadmaster, who will forward it to the Division Superintendent, who will in turn forward it to the Claim Agent. Particular attention should be paid as to whether the fire caught on or off the Company's right-of-way, the condition of the right-of-way as to dry grass, leaves or other combustibles, and the facts must be fully stated in this report. Every effort should be made to ascertain correctly the actual loss. A separate report should be made for each owner of property.

1. On the day of 190....., at o'clock Day or Night
 On Sec. No. miles (east, west, north or south) of
 The nearest station between mile posts and
 Property burned belonging to
 of County of State of
2. Name of tenant, if rented, and his interest in property
3. Give full and complete list and description of property burned.
 (If grain, meadow or grass, number of acres, kind of grass and value; if hay, millet or straw, number and size of ricks or stacks, number of acres from which cut, number of tons and value; if fence, length and full description; if trees, number, kind, age and size, with number of acres burned over, etc. If any other property give detailed description. Foremen should measure at once the length and width of stack and also estimate height. When corn or meadow is burned the ground should be measured.)

4. Estimates of loss: Section Foreman's, \$ Owner's, \$
5. No. of train starting fire Engine No. (freight or passenger)?
6. Was train going up or down grade?
7. Condition of right-of-way at time of fire, whether covered with weeds, dry grass or combustible material
8. When was right-of-way last burned off or grass cut?
9. Did fire start on right-of-way or on outside?
10. On which side of track did fire start?
11. If fire did not start on right-of-way, how near to center of track did fire approach?
12. Distance from center of track to where fire started? feet.
13. How far from center of track to where property burned?
14. Do you think that the fire was started by train?
15. Was wind blowing?; if so, high or low? from what direction?
16. Number and class of train last passing before the fire?
17. What effort was made to put the fire out, and by whom?
18. Name and postoffice address of witnesses who saw fire start?
19. Who was first at the fire?
20. Where were section men at time of fire?
21. How soon did they get to the fire after it started?
22. What is foreman's opinion as to origin of fire?
23. Was there any other fire burning near the property?
24. Did this engine set other fires on this trip within your knowledge; if so, when and where?
25. Give names of your section men
26. State fully any other facts known

Section Foreman, Section No. at Station.

SECTION FOREMAN'S REPORT OF STOCK KILLED OR INJURED.

Section Foreman will make report on this blank, of all accidents in which stock is killed or injured, answering each question fully, and return it promptly to the Division Roadmaster, who will forward it to the Division Superintendent. Particular attention should be paid as to whether the accident occurred on a public crossing or inside of the right-of-way, the condition of the fences, gates and cattle guards, and the actual value of stock killed or injured. A separate report should be made for each owner of stock.

1. On the day of 190....., at about o'clock M., Daylight or dark On Section No. about miles (state direction) of Station, Engine No. Engineer hauling Train No. (state whether passenger or freight train) Conductor struck and killed or injured the following stock: (State number and kind. Describe stock and nature of injuries.)
2. Weight Lbs. Years old
 " " " " " "
 " " " " " "
3. Belonging to
4. Whose Post Office address is
5. Amount of damage claimed \$ I estimate damage at \$
6. Was the stock struck on a public highway crossing?
7. Were cattle guards and fences leading to guards on both sides of highway in perfect order?
8. How long constructed, and were guards pit or surface?
9. Was the stock struck on depot grounds, between switches, or between switch and cattle guard?
10. How did the stock get upon the track, and through whose negligence?
11. Is the right-of-way fenced on both sides of track?
12. In what condition is fence?
13. If out of repairs, state in what particular, and how long it has been so, and your reason for not repairing it
14. What is height of fence? feet. inches
15. Of what material is fence; how many wires or boards? (Barbed or flat wire?)
16. How long has fence been built and when last repaired?
17. If the stock got upon right-of-way at a private crossing, what was the condition of the gates or bars at time of accident?
18. Who discovered the gate open after accident occurred?
19. By whom was gate closed after accident occurred?
20. When was the last time you passed point where stock got upon right-of-way before accident?
21. Were the gates or bars then closed?
22. Was the fence in perfect order?
23. Did accident happen at point where track was straight; if so, for what distance before stock was struck?
24. Was the grade up or down, and for what distance from point of accident?
25. In your judgment, how far could engineer or fireman have seen stock before reaching point of accident?
26. Who disposed of the carcass and hide?
27. How much was received for the carcass and hide, and who received the money?
28. If you know of any person who witnessed the accident, other than the trainmen, give name and address
29. Give any other information you can relating to this accident that you think will be of value to the Company
30. What does owner claim as to how and where stock got on the right-of-way?

NAME	RESIDENCE	} Section Foreman.
.....	
.....	} Name and Residence of men employed on Section at time of Accident.
.....	

Dated at 190.....

NOTICE.—Section Foreman will fill this blank, and answer all questions in all cases when stock is killed or injured on his section, whether in his opinion the Company is liable or not, and forward the same promptly to Roadmaster of Division.

DUTIES OF SECTION FOREMEN IN REFERENCE TO STOCK KILLED OR INJURED.

When stock has been killed or injured on a section, the section foreman should, if possible, notify the owner and request him to take charge, and assist him in removing dead or crippled stock if requested.

When the stock is injured so badly that the carcasses and hides are unfit for use, or when owner refuses to take charge of them, the section foreman should bury them.

Should stock killed or injured have been removed before the foreman is informed of the accident, he must not fail to make a report, being particular to give name and address of informant.

When passing over his section, if gates are found open or bars down, he should close them whether there is stock in pasture or not.

If owners of land adjoining right-of-way make it a practice or insist upon leaving the gate open or bars down at their private crossings, or pasture stock upon Company's right-of-way, he should notify the Roadmaster, giving full particulars.

In event stock is killed or injured, the foreman should ascertain from owner (and otherwise) how and where stock got on the right-of-way.

When stock gets upon the right-of-way by breaking through Company's fence, the section foreman must personally examine the fence, and thoroughly post himself as to the nature of the break, and make close examination for tracks of animals; also at gates or bars.

Section foremen must not state to owner of the stock their opinion as to what proportion of the value of stock will be allowed by the Company, or admit any liability whatever.

When owners of stock killed or injured make inquiry as to how they shall proceed, the foreman should inform them that to insure a prompt adjustment of their claims they must communicate direct with the superintendent.

In addition to the foregoing forms, there are others used by section foremen such as the Certificate of Wages Due; the Application for such certificate; Certificate of Identification and so on. These blanks, however, are the same as those used in other departments of the service and so need not be separately mentioned in connection with the track accounts of railroads. They will be found with other blank forms relating to expenditures of labor and material, in the volume on Railway Disbursements in the "SCIENCE OF RAILWAYS."

SURPLUS MATERIAL

"Superintendence, Maintenance of Way and Structures"
"Repairs of Interlocking Plants."
"Repairs of Block Signals"
General Repairs of Bridges and Culverts
Bridge Watchmen
"Repairs of Fences, Road Crossings, Signs and Cattle Guards"
"Flagmen"
"Clearing Wrecks"
"Laborers at Stations"
"Maintaining Telegraph"
Unloading Coal into Storage
Unloading Wood into Storage
"Fuel for Locomotives"
Loading Cinders at Cinder Pits
Ballasting
Rectifying Grades
Widening Embankments and Cuts
Ditching
Fences
Road Crossings and Signs
Telegraph
Side Tracks
Block Signals
Interlocking Plants
Miscellaneous

CONSTRUCTION

DIVISIONS OF THE ROAD	SUBDIVISIONS OF THE ROAD	Miles of Track and Certain Sidings	Number of Men Employed per Mile of Track, (Excluding Bridge Watchmen and Flagmen at Crossings)	Corresponding Month, Previous Year	Current Month	Total Cost	Total Average Cost per Mile	Laying Rails	Laying Ties	General Repairs of Track	Ballasting	Filling Bridges and Culverts	Cleaning Out Ditches	Clearing Track of Snow and Cutting Weeds	Track Watchmen	Freshet Repairs	Average Cost per Mile for "Repairs Roadway and Track"	

"REPAIRS OF ROADWAY AND TRACK"

NOTE:—The purpose of these statistics is to make comparisons of cost for the different divisions and subdivisions of the road. The table should include all men employed on sections, working trains and those otherwise engaged in connection with the track as for the several headings. The information is compiled monthly from the time book of track labor (given elsewhere herein). At the bottom of the sheet the totals should be shown for the current month, and below these the totals for the same month of the previous year, the increases or decreases being given underneath.

MONTHLY COMPILATION OF TRACK LABOR FOR THE INFORMATION OF OPERATING OFFICERS

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