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Logging, Plantation, Mining, Industrial & Standard Railroad Motive Power.

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THE LOCOMOTIVE WORLD
PUBLISHED MONTHLY BY
THE FRANKLIN TYPE AND PRINTING COMPANY
H. C. HAMMACK, Editor
WEST AND HIGH STREETS LIMA, OHIO.

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NOTICE TO ADVERTISERS
Advertising rates furnished upon application. Change in advertisements intended for a particular issue should reach the office of the Locomotive World no later than the 20th of the month prior to the date of issue. New advertisements requiring no proof can be received up to the 1st of the month of date of issue.

THE FRANKLIN TYPE AND PRINTING COMPANY

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Large Gains in Railroad Earnings

ACCORDING to figures published by the Interstate Commerce Commission, the net revenues per mile of 151 of the principal railroads of the country increased more than 71 per cent during November, 1915. It is shown that the average net revenue per mile was $504, as compared with $294 for the same month in 1914. It is also stated that during the five months ended with November there was a gain of 28 per cent in average earnings per mile as compared with the same period of 1914. In the five months of 1915 the average earnings per mile were $2344, while in 1914 they were $1825.

The aggregate length of the 151 railroads is 199,765 miles, and their total operating revenues for November were $267,956,618; their operating expenses $167,363,102, and their net revenue $100,593,516. Thus the average gross revenue per mile was $1341, expenses $837, and net revenue $504. The gross revenues for the five months aggregated $1,283,982,408; expenses $815,896,923, and net revenue $468,085,485. Thus the average gross revenue per mile was $6430; expenses $4086, and net revenue $2344.

Comparison with the corresponding five months of 1914 shows that these railroads experienced an increase in gross revenues in 1915 of $115,472,759, while operating expenses increased only $9,931,604, so that the increase in net revenues was $105,341,355, or an average of $21,068,271 per month. Thus the average increase in net for the 151 roads was $139,525 per month.

In this connection it is interesting to note the report of the Bureau of Railway Economics for October, showing that the combined operating income of the railroads in the South for that month displayed an increase of 54 per cent as compared with October, 1914. But it is remarked that in October, 1914, operating income was much the lowest in six years, and making comparison with the average for the last five years the gain in operating income was about 12⅓ per cent.—*Manufacturers Record.*

Correction

In the article "Big Mallet Locomotives for Western Maryland Railway" in the December issue, in the sixth line reference is made to tonnage of train, and is printed as 200 tons. The correct tonnage is 2000 tons.

Bigger Locomotive Works Is Predicted

Ringing applause last night greeted the statement of Kent W. Hughes, president of the Chamber of Commerce, that the recent change in the ownership of the Lima Locomotive Corporation would bring to Lima and to all employes a greater institution.

The assertion, which the speaker said was upon authority, was made at the first annual banquet of the Lima Locomotive Corporation fire department, held in the ball room of the Elks Home. The meet was attended by more than 100, composed of officials of the company, guests, foremen, piece-work contractors and departmental clerks.

FOREIGN AGENT SPEAKS

It was a night of unalloyed mirth for the most part, every speech, save one, having a liberal spicing of jovialty. The contrast was furnished in the talk of James N. Davis, foreign sales agent of the concern. His graphic stories of the horrors and the pathos of the war in England and France brought a complete hush. The speech was the most impressive of the night.

Watson M. Myers, assistant general manager, acted as toastmaster, and thanked the members of the fire department on behalf of the company for their service, which he said insured the safety of the plant.

Other speakers on the fixed program were F. W. Hicks, assistant superintendent, "Fire Departments for Industrial Plants"; James N. Davis, "War Scenes in England"; John C. Mack, chief of the Lima fire department, "Fire Fighting"; H. C. Hammack, general sales manager, "Safety First"; and E. A. Hanner, "Our Duty as Firemen".

INFORMAL SPEECHES

Those who spoke informally were Kent W. Hughes, president of the Lima Chamber of Commerce, James Roundtree, foundry foreman, E. L. Riley, Hagerstown, Md., inspector for the Maryland Western railway, George Phillips, Louis Stephens, S. S. Lawson, L. E. Feightner, William Griffin, George Boyle, William Kutheran, and Paul Agerter, oldest employe of the company.

While the dinner, which began at eight o'clock and lasted until near midnight, was in progress an orchestra played and every time a popular tune was sounded the party, led by Assistant Superintendent Hicks, joined in the chorus with a will.

SINGERS FROM PLANT

A song by Earl Simons, employe of the company, sung in a rich and powerful voice, was received with high favor. A burst of applause brought an Irish song which won even greater applause, but Simons and his accompanist, Miss Marguerite Zender, evidently were not prepared for the emergency. Further talent at the big plant was exhibited when John J. Malloy made a humorous speech followed by a song.

GUESS HONOR GUEST

As the guest of honor was J. H. Guess, New York, who represents the syndicate of bankers which now owns the corporation. Others at the speakers table were J. J. Malloy, chairman of the banquet committee, James N. Davis, H. C. Hammack, J. M. Heckford, secretary of the firemen, John Custenborger, H. H. Franks, president of the firemen, F. W. Hicks, Toastmaster Myers, J. H. Guess, K. W. Hughes, George Phillips, Fire Chief Mack, E. A. Hanner, Frederick Rentz and Earl Simons. Regrets were sent by President A. L. White, who explained that he could not be present, but was fully appreciative of the services of the firemen.

To provide souvenirs of an occasion which was predicted as the first of many, a flashlight of the members of the party was taken as they sat at the table.

Coal Reserves in the United States

By the annual report of the Secretary of the Interior it appears that although we are the largest consumer of coal in the world, using nearly 40 per cent of the world's production, we have as yet consumed but one-half of 1 per cent of the total quantity the geologists estimate as present in the United States. The annual production of coal in the United States has increased over 800 per cent in 35 years—from 68,000,000 short tons in 1879 to 570,000,000 short tons in 1913. The total value at the mines of the coal produced in 1913 was $760,000,000.

The public-land States in the West contain the largest reserve of bituminous coal, both high and low grade, and of lignite in the world. Nearly half of this reserve is yet in public ownership. In the public-land States it is estimated that there are 100,000,000,000 recoverable tons of bituminous coal and lignite in beds of sufficient thickness and near enough to the surface to be profitably mined under present commercial conditions and many times that amount in thinner beds and at greater depths that can not be profitably mined at present.

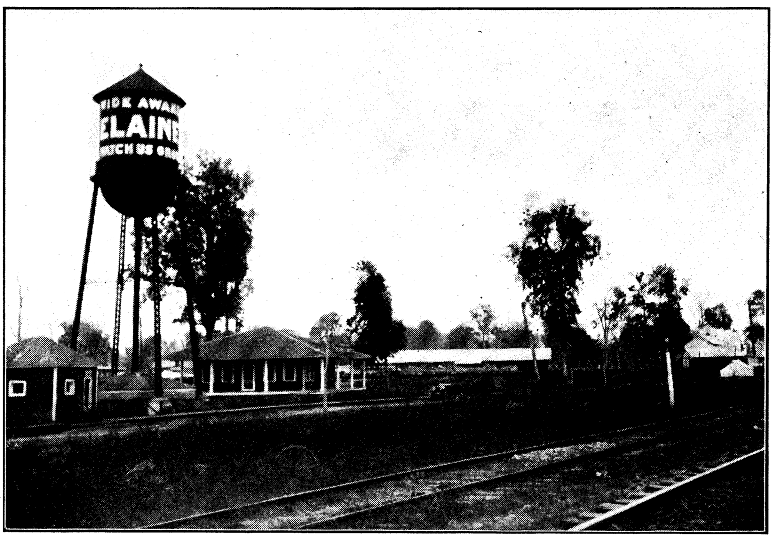
(Continued on page 9)

An Account of the Gerard B. Lambert Co., Elaine, Ark.

By Gerard B. Lambert, President

REGARDING the operations of the Gerard B. Lambert Co., I am able to give the following general items of interest:

Elaine is on a division of the Iron Mountain railroad, thirty miles south of Helena, Ark. From this point, the Gerard B. Lambert Company, an Arkansas corporation, of which I am president and Henry F. Holbrook, secretary and treasurer, has built a railroad to the timber holdings of that company, six miles due west of Elaine. This logging road was built for the most part during the winter, and was a great source of trouble on account of the difficult character of the soil. It is an alluvial deposit and when wet, turns almost to liquid. We finally succeeded in ballasting the road with 18 inches of gravel, and now have practically no

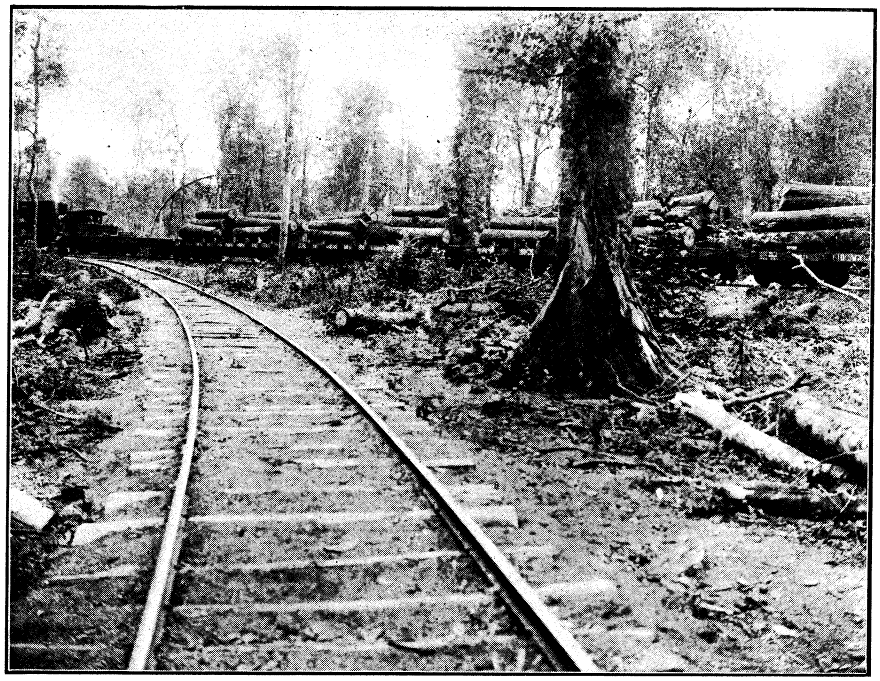


General Office Gerard B. Lambert Co., Elaine, Ark.

trouble with it. We use all oak ties, which are supplied from our own property. The road is standard gauge and the steel from 56 to 60 pounds. The timber being cut is hardwood, 40% oak, 50% gum and the remainder miscellaneous. We have about ten miles of ballasted main line so far, and maintain an additional ten miles of spurs. This, of course, is not ballasted, and is put directly on the ground using, however, all oak ties and the same size rail. Our spurs run north and south from the main line every quarter of a mile. We keep four spurs working at once and as they are cleaned up, move the steel west for the spurs.

All the timber of the Gerard B. Lambert Company is being delivered under a flat contract to the newly constructed hardwood mill of The Chicago Mill & Lumber Company, West Helena. This company owns 150 steel flat cars of standard construction with a capacity of 80,000 pounds. These are confined exclusively to our service.

We maintain two 24-ton Shay locomotives on our spurs and one 42-ton Shay on our main line. We find this locomotive equipment entirely sufficient for the operation. The cars from the spurs are hauled to the main line by the 24-ton Shays, and they are made up twice a day in a train for the 42-ton to haul to Elaine, six miles away. This 42-ton, our No. 5, can handle 38 loaded log cars at one time over our main line without any particular trouble. These cars are loaded each with logs averaging 5500 board feet. I believe this green hardwood weighs at least 12 pounds to the foot, giving the timber alone a weight of 66,000 pounds for each car. The logging train on arrival in Elaine is taken by the locomotive belonging to the Chicago Mill & Lumber Company, and the entire train is run through to West Helena. They

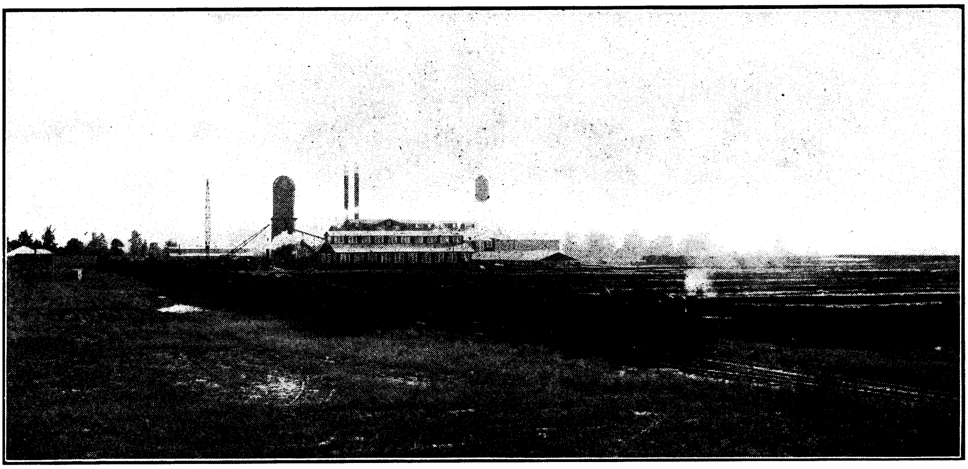


24-ton Shay Locomotive with Logging Train.

run over the tracks of the Iron Mountain until about three miles of their plant, and from this point, over their own tracks to the mill. This train service, in which they employ their own cars, locomotive and train crew, is run on the Iron Mountain independently of their service, but they are paid a certain rate per ton per mile for this trackage right.

Our logging plant delivers logs all the year around in spite of weather conditions. Each day after September we bring in a few cars over and above those to be delivered and these are unloaded and stored at a storage yard in Elaine. The machine for doing this work was constructed especially for us by the Clyde Iron Works at Duluth, Minn. It has a 16 foot gauge, and is self-propelling, allowing the standard cars to pass underneath after unloading. With its 75 foot boom it is enabled to pile the logs on a high pile with ease. In case of over-flow or very wet weather on the land where we are logging, we deliver to the Chicago Mill & Lumber

42-ton Shay Locomotive owned by Chicago Mill and Lumber Co., hauling train load of logs to mill at West Helena.



Plant of Chicago Mill and Lumber Co. at West Helena, Ark.

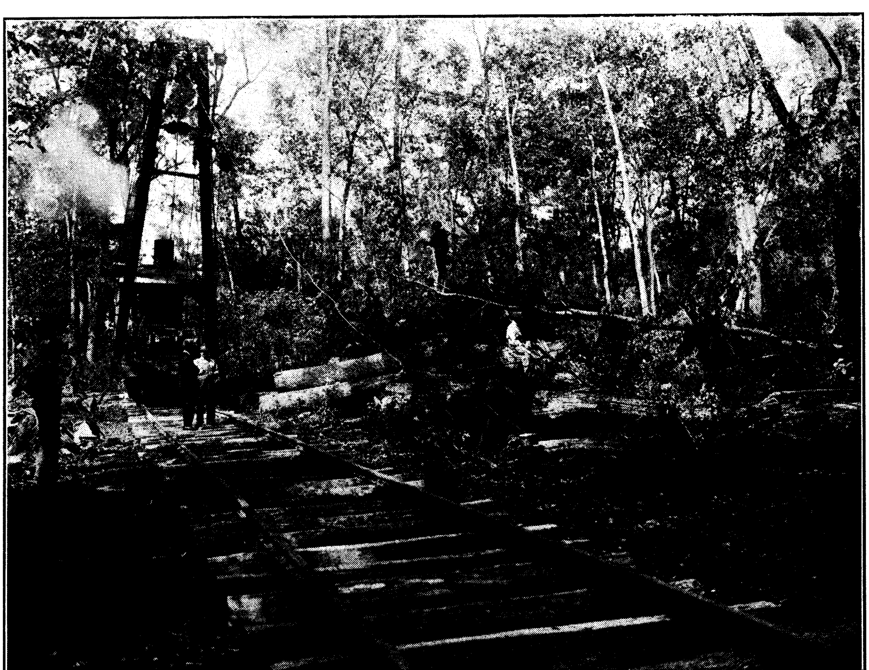
Company from this storage yard, and are thereby enabled to keep up consistent deliveries throughout the year.

Our capacity in running full is 48,000,000 ft. per year. I do not believe you will find another single logging *hardwood* operation in the South delivering this quantity.

Regarding our logging equipment, we have four double line mule out-haul self-propelling Clyde skidders, all identically the same and interchangeable; also four Clyde rapid loaders, all interchangeable. We are thus enabled to keep a skidder and loader available for emergencies and have sufficient operating capacity at all times.

From the above you will see that our machinery equipemnt is confined practically to two companies—four skidders, four loaders and an unloading machine from Clyde, and three Shay locomotives from the Lima Locomotive Corporation. That we deliver the goods is sufficient answer as to their quality.

The locomotive of the Chicago Mill & Lumber Company for the haul from Elaine is a



Self-propelling double line Clyde Skidder used by Gerard B. Lambert Co.

rod locomotive of 70 tons, I believe. They maintain also a 42-ton Lima for switching at their plant. This is locomotive No. 10 in the photographs.

The plant of the Chicago Mill & Lumber Company in West Helena is of the latest type, and has not been completed longer than a few months. The sawmill has a capacity of 80,000 feet and the veneer and box plant has a capacity of 60,000 feet. This is, of course, only one of their many plants.

The primary object of The Gerard B. Lambert Company is not to remain in the lumber business, but to clear up all of the land which they are now logging and put same under cultivation, mostly in cotton. The plans for towns, building, etc. have been carefully laid in advance and they will endeavor to establish a scientific up-to-date farming community. The soil, as you know, is a combination of the salt of the Mississippi River and some lime overflow of the White River, forming a deposit which is as rich as any soil in the United States. The timber averages 8,000 feet per acre, and is very fine hardwood of its kind.

New Additions to the Rules for Inspecting Steam Locomotives

Additions to the rules and instructions already in force in regard to the federal boiler inspection law have been approved by the Interstate Commerce Commission and the railroads, and take effect at the beginning of the present year. Among some of the additions are the following:

RULES AND INSTRUCTIONS

The railroad company will be held responsible for the general design, constrcution and maintenance of locomotives and tenders under its control.

The mechanical officer in charge, at each point where repairs are made, will be held responsible for the inspection and repair of all parts of locomotives and tenders under his jurisdiction. He must know that inspections are made as required, and that the defects are properly repaired before the locomotive is returned to service.

The term "inspector" as used in these rules and instructions means, unless otherwise specified, the railroad company's inspector.

Each locomotive tender shall be inspected after each trip, or day's work, and the defects found reported on an approved form to the proper representative of the company. This form shall show the name of the railroad, the initials and numbers of the locomotive, the place, date and time of the inspection, the defects found, and the signature of the employe making the inspection. The report shall be approved by the foreman with proper written explanation made thereon for defects reported which were not repaired before the locomotive is returned to service. The report shall then be filed in the office of the railroad company at the place where the inspection is made.

ASH PANS

Ash pans shall be securely supported and maintained in safe and suitable condition for service.

Locomotives built after January 1, 1916, shall have ash pans supported from mud rings or frames. Locomotives built prior to January 1, 1916, which do not have the ash pans supported from mud rings or frames shall be changed when the locomotive receives new firebox.

The operating mechanism of all ash pans shall be so arranged that it may be safely operated and maintained in safe and suitable condition for service.

No part of ash pan shall be less than 2½ inches above the rail.

CABS, WARNING SIGNALS AND SANDERS

All cabs shall be securely attached or braced and maintained in a safe and suitable condition for service. Cab windows shall be so located and maintained that the enginemen may have a clear view of track and signals from their usual and proper positions in the cab.

Road locomotives used in regions where snowstorms are usually encountered shall be provided with what is known as a "clear-vision" window, which is a window hinged at the top and placed in the glass in each front cab door or window. These windows shall be not less than 5 inches high, located as nearly as possible in line of the enginemen's vision, and so constructed that they may be easily opened or closed.

Steam pipes shall not be fastened to the cab. On new construction or when renewals are made of iron or steel pipe subject to boiler pressure in cabs, it shall be what is commercially known as double strength pipe with extra heavy valves and fittings.

Cab aprons—Cab aprons shall be of proper length and width to insure safety. Aprons must be securely hinged, maintained in a safe and suitable condition for service and roughened, or other provision made, to afford secure footing.

Cylinder cocks—Necessary cylinder cocks, operated from cab of locomotive, shall be provided and maintained in a safe and suitable condition for service.

Sanders—Locomotives shall be equipped with proper sanding apparatus, which shall be maintained in safe and suitable condition for service, and tested before each trip. Sand pipes must be securely fastened in line with the rails.

THROTTLE AND REVERSING GEAR

Throttles—Throttles shall be maintained in safe and suitable condition for service, and efficient means provided to hold the throttle lever in any desired position.

Reversing gear—Reversing gear, reverse levers, and quadrants shall be maintained in a safe and suitable condition for service. Reverse-lever latch shall be so arranged that it can be easily disengaged, and provided with a spring which will keep it firmly seated in quadrant. Proper counterbalance shall be provided for the valve gear.

Upon application to the chief inspector, modification of these rules, not inconsistent with their purpose, may be made for roads operating less than five locomotives, if an investigation shows that conditions warrant it.

ACCIDENT REPORTS

In the case of an accident resulting from failure, from any cause, of a locomotive or tender, or any appurtenances thereof, resulting in serious injury or death to one or more persons, the carrier owning or operating such locomotive shall immediately transmit by wire to the chief inspector, at his office in Washington, D. C., a report of such accident, stating the nature of the accident, the place at which it occurred, as well as where the locomotive may be inspected, which wire shall be immediately confirmed by mail, giving a full detailed report of such accident, stating, as far as may be known, the causes and giving a complete list of the killed or injured.

Note—Locomotive boilers and their appurtenances will be inspected in accordance with the order of the Commission, dated June 2, 1911. Safety appliances on locomotives will be inspected in accordance with the order of the Commission dated March 13, 1916. *Railway & Locomotive Engineering.*

Superheaters on Small Locomotives

In order to realize the greatest benefit from the economies which obtain in the use of superheaters, applications to existing locomotives have for the most part been confined to the larger classes of power which are, of course the greatest money earners. The value of the superheater is now so well recognized that large numbers of the heavier types of locomotives which were originally built as saturated steam engines have had superheaters applied while passing through the shops, and others are undergoing the same change as rapidly as arrangements can be made to accomplish it. However, as yet little has been done toward the application of superheaters to what were the large locomotives of a few years ago, and which are now, for the most part, relegated to branch line and local main line service.

This is a problem which should, of course, be considered strictly from a business standpoint and it is not intended to suggest that the railways should apply superheaters to all existing locomotives, no matter how small or in what condition they may be, although in at least one case locomotives that would otherwise have to be discarded are being reclaimed by the expenditure of a comparatively small sum in the application of superheaters and allied changes, in such a manner as to make them serviceable for many years on branch lines. But the locomotives which would seem to hold out the greatest immediate possibility of economy by conversion from saturated to superheated steam are those of the Atlantic, Ten-wheel and Eight-wheel types in passenger service, and the Consolidation, Ten-wheel and Mogul types in freight service, built within the last 15 or 20 years. Many of these engines are already equipped with piston valves, a factor of considerable saving in making the change, as the slide valve cannot as yet be said to work satisfactorily with superheated steam. There are passenger trains now being hauled by Pacific type locomotives on schedules which could be successfully maintained by Ten-wheel or Atlantic type locomotives if given the increased boiler capacity which the superheater provides, and trains now operating on schedules which tax the capacity of engines of the two latter types to the utmost could then without difficulty undergo an increase in the number of cars or in the weight of the equipment. In this connection the increased weight of cars is a consideration which should not be overlooked. The general introduction on the main lines of most of the railways of steel equipment for passenger service has resulted in a great many cases in heavy wooden coaches being displaced for use on local and branch line passenger trains; indeed in some instances, steel underframe and all-steel passenger cars are in every-day use on such trains as well as on the heavier through trains. The use of this heavy equipment frequently presses the smaller saturated steam locomotives to the limit, and it becomes difficult or impossible for them to make up lost time or to get over the road on the schedule when it becomes necessary to add a car or two. The addition of superheaters to locomotives of the types mentioned increases their capacity so that they can successfully haul trains which otherwise they would be unable to handle and which, on the other hand, would not justify, from the standpoint of needed capacity, the employment of locomotives of the larger types.

Another opportunity for utilizing the economy of superheated steam is to be found on roads or divisions where the purchase of heavier motive power in order to increase trainloads will necessitate heavy expenditures for increasing the track and bridge capacity. In such cases the application of superheaters to existing engines will increase their hauling capacity and thus postpone the time when an increase in the weight of rails and the strength of bridges becomes necessary. Altogether it would seem that there must be large numbers of locomotives of these smaller types, on which the expenditure required to change them for the use of superheated steam would be amply justified by the economy afterward obtainable.—*Railway Age Gazette.*

Speed of Locomotives

When left to its own locomotive ability, man is not a high speed animal, nearly all the beasts of the field and of the forests being capable of leaving human beings far behind in a race. Man's own capacity for speed is remarkably limited, but with power appliances of his own construction he has been able to exceed the speed of all animals and all forces except the electric spark. The locomotive had no sooner been worked into smooth running condition, when railway men and others proceeded to demonstrate its speed capacity. For years no pacticular attention was directed to the hauling power of the locomotive, but the pioneer journals devoted to railway matters were kept full of accounts describing the extraordinary speed attained by certain locomotives.

There seems to have been a curious propensity towards building locomotives capable of maintaining speed of not less than a mile a minute—sixty miles an hour—even where the track was not safe to carry trains running at half the speed named. "A mile a minute" was easily remembered, and for a few years was a sort of shibboleth with locomotive designers. They built the high speed engines and were proud of their enterprise, until they learned in a most impressive manner that they were blundering, for it was proved beyond explanation that the boilers would not generate the steam necessary to keep the wheels turning. The pioneer locomotive designers concluded in the first place that the most important element of high speed was large driving wheels, which were supplied. To revolve huge driving wheels, large cylinders were necessary, and these were put in so liberally that a few charges of steam emptied the small boilers that were not so very much larger than the cylinders. Experience now became a useful teacher of needed harmony in the parts of a locomotive. This particular school of instruction proved very expensive to railway companies, but it had to be attended to.

The first master mechanics had only theory and good sense to guide them in their early designs, and a natural line of reasoning was, that large driving wheels operated by large cylinders would produce a good working locomotive. It took years of expensive experiment and experience to demonstrate proper proportions. The best length of stroke in relation to cylinder diameter was long a question in controversy.

Two of the most celebrated pioneer master mechanics were Robert L. Stevens and Isaac Dripps. One of the first locomotives brought out by these mechanics was the "Stevens," which had cylinders 13 x 30 inches. That engine was found deficient in tractive power a thing not to be wondered at, seeing that the driving wheels were 96 inches diameter. To remedy the want of tractive power, the next engine built under the direction of these eminent engineers had a storke of 38 inches with the same size of driving wheels. This long stroke did not produce a successful locomotive but it acted as a caution signal for that form of engine. It had the longest stroke ever used.

In following the tendency of locomotive designing, we find that the diameter of driving wheels gradually decreased till the neighborhood of 60 inches became the favorite, and persisted for many years, thousands of very successful locomotives with that size of driver being in service today. The most influential move towards modern designing was represented in two locomotives built by William Norris for the Erie Railroad, with cylinders 14 x 32 inches. These engines became famous for their excellent performance and many railroads began to demand duplicates.

The proportions of grate area to boiler heating surface and the proportion of heating surface to cylinder content with the weight and power were all established by a tentative process. Certain builders turned out engines of certain proportions that met with popular judgment and prejudices which were accepted as being correct. Ability in designing was less apparent than good luck, and, in many cases, persistent advertising. In whatever manner its form and proportions may have been developed, the American locomotive stands second to none with the people interested in moving passengers and freight expeditiously at low cost.—*Railway and Locomotive Engineering.*

(Continued from page 2)

So great is our use of coal and so large is our annual coal bill that consumers are constantly striving to obtain the largest measure of heat possible from their coal. This is being accomplished by the development of improved boilers and furnaces which permit the use of lower-grade coal, by the use of producer gas, and by the use of powdered fuel. The progress made in the use of coal in the last five years along mechanical and metallurgical lines is nothing short of remarkable.

If need be, the United States can supply the world with coal. The supply of coal is here, and undoubtedly the capital, labor, and transportation facilities will be forthcoming if the price of coal rises sufficiently to warrant their use for this purpose. But it is to be hoped that the great bulk of our coal will be utilized at home in the upbuilding of our industries. The apparent limitless extent of our coal reserves has made us prodigal in our waste of them. Coal is cheap in this country, and not until we put a higher value on it will proper attention be paid to its conservation in the ground. During each year for every 500,000,000 tons of coal produced we waste or leave underground in such condition that it probably will not be recovered in the future at least 250,000,000 tons of coal. This represents an average recovery of 66 per cent. In some cases the recovery in former years has not exceeded 30 per cent of the contents. However, under the best current practice with improved mining methods some mines are now recovering 85 to 90 per cent, and the improvements in this regard are still going on with every assurance of still greater saving.—*Railway & Locomotive Engineering.*

Grain Production in 1915

The correct figures for grain and potato production in the United States in 1915 are as given below, the figures published last week having been erroneous, due to a mistake in addition.

Crop	1915 Bushels	1914 Bushels	Increase Bushels
Corn	3,054,535,000	2,672,804,000	381,731,000
Winter wheat	655,045,000	684,990,000	*29,945,000
Spring wheat	356,460,000	206,027,000	150,433,000
Oats	1,540,362,000	1,141,060,000	399,302,000
Barley	237,009,000	194,953,000	42,056,000
Rye	49,190,000	42,779,000	6,411,000
Buckwheat	15,769,000	16,881,000	*1,112,000
Flaxseed	13,845,000	13,749,000	96,000
Rice	28,947,000	23,649,000	5,298,000
Potatoes	359,103,000	409,921,000	*50,818,000
Sweet potatoes	74,295,000	56,574,000	17,721,000
*Decrease	6,384,560,000	5,463,387,000	921,173,000
Gross increase			1,003,048,000
Decrease			81,875,000
Net increase			921,173,000

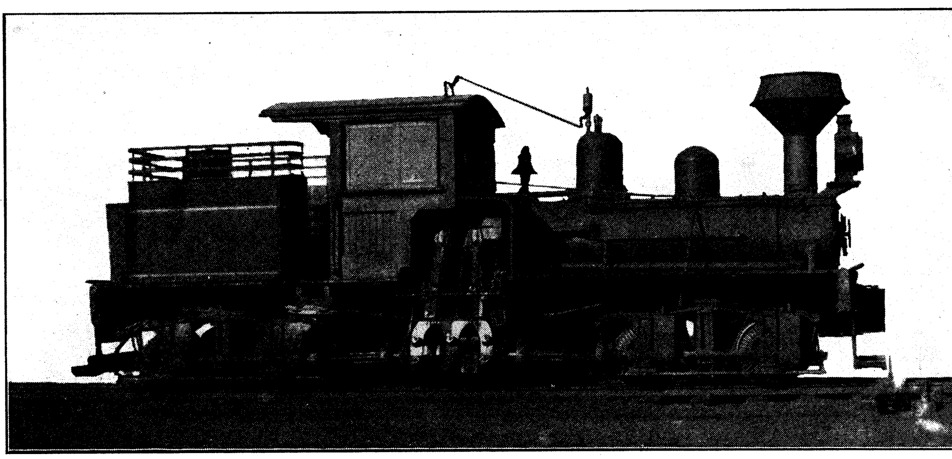
Directory of Railway, Locomotive, Engineering and Mining, and Lumber Journals.

ARE YOU LOOKING FOR SECOND HAND LOCOMOTIVES ?

This 18 Ton Second Hand Shay Locomotive

Slightly used, and has been thoroughly overhauled.

Good as new for all practical purposes.



18-ton Second Hand Shay Locomotive in stock at Lima. Gauge 56½″, Coal or Wood Burner, Steam Brake.

SECOND-HAND LOCOMOTIVES

	Tonnage	Type	Gauge	Location	Reference No.
1	24	Shay	42 ″	Pennsylvania	138
1	24	Shay	36 ″	Pennsylvania	0138
1	42	Shay	56½″	Louisiana	140
1	50	Shay	56½″	Wisconsin	141
1	45	Shay	56½″	Vermont	142
1	32	Shay	56½″	New Hampshire	143
1	28	Shay	56½″	New Hampshire	144
1	23	Shay	56½″	New Hampshire	146

Write for full information and price on the above Equipment

THE LIMA EQUIPMENT CO.

LIMA, OHIO

INDEX TO ADVERTISERS AND WHAT THEY HAVE TO SELL