

than one-quarter the amount then accrued and, while this legal decision was probably not the only factor involved, it undoubtedly hastened the day when the D. & H. Canal would lose the business of the Pennsylvania Coal Company to the Erie Railroad.

OFFICE OF THE DEL. & HUD. CANAL CO., }
New York, July 28, 1853. }

JOHN EWEN, Esq.,
Prest. of the Penna. Coal Co. :

Dear Sir,—I am instructed by the Board of Managers of this Company to notify the Penna. Coal Co. that the enlargement of the canal of the Delaware and Hudson Canal Co., contemplated by the articles of agreement between it and the Wyoming Coal Association is now completed, and that this Company will hereafter charge and collect the additional toll on coal entering the canal at Hawley, to which it is entitled by said contract.

And I have it further in charge to say, that said Canal Company have, according to the requirement of said agreement, made a fair estimate of the amount of savings in the transportation of coal growing out of said enlargement, and find it to be forty-cents per ton; and said Canal Company therefore claim of said Coal Company the one-half of said amount, that is to say, twenty cents per ton additional toll on all coal hereafter to be transported by said Coal Company on said canal.

Nothing herein contained is intended to waive any claim made by this Company in former communications.

Respectfully,

WM. MUSGRAVE,
V. P.

OFFICE OF THE PENNA. COAL CO., }
New York, Augt. 1st, 1853. }

WM. MUSGRAVE, Esq.,
Vice-Prest. Del. & Hud. Canal Co. :

Dear Sir,—Your letter of the 28th ult., in reference to the enlargement of the Delaware and Hudson Canal, and the additional toll to grow out of the same, has been duly

received and laid before the Board of Directors of this Company.

I am desired by the Board to inform you that this Company has also made a careful examination in regard to such additional toll, and does not find the savings in the transportation of coal which are alleged in your communication to have been produced by the said enlargement; and that, not being able to agree with your Company in respect thereto, it is ready to proceed in the manner contemplated in such contingency by submitting the matter in difference to the arbitration provided for in the contract to which you have referred.

Respectfully,

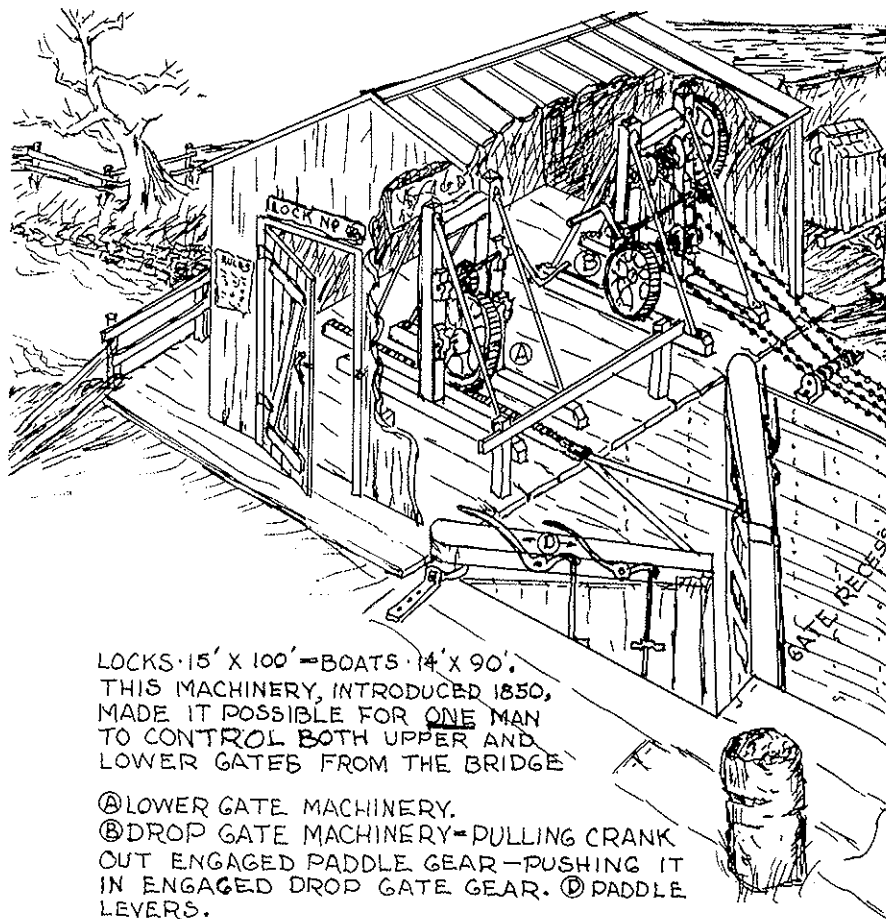
JOHN EWEN,
Prest.

To place its business on a more independent basis and avoid further friction with the D. & H. over these tolls the Pennsylvania Coal Company in 1860 began the construction of a six-foot gauge steam railroad from Hawley to a junction with the Erie Railroad at Lackawaxen, sixteen miles to the east. While the grade here is about seventeen feet to the mile a continuation of the gravity road was out of the question because the Lackawaxen Valley is very narrow and confined between steep mountain sides. The work progressed slowly and the road was not finished until December 14, 1863, when the first coal train was run over the line. The fact that a railroad could be operated the year round was thus driven home with such emphasis that it could not well be ignored by the managers of the D. & H. Canal and it unquestionably started them thinking in terms of locomotive railroads. In fact, it was the handwriting on the wall insofar as the canal was concerned, although the D. & H. Canal still had many more years of hearty life before it ultimately succumbed in the unequal struggle.

The abrupt change in the outlook of the D. & H. management in favor of railroads is more apparent after reading a letter written by S. B. Ruggles on August 26, 1859, who, while his interest was the Erie Canal and the efforts of railway interests to cripple it, said:

"The Delaware & Hudson Canal now carries 1,300,000 tons of coal in addition to considerable other merchandise and its intelligent officers declare that notwithstanding that their canal is navigable only seven months a year, nothing could induce them to exchange for a railroad."

Within a few years the metamorphosis of the Delaware & Hudson Canal Company into a railroad company was begun; not, however, with any thought in mind of ever abandoning the canal, for the majority of the board of managers remained canal minded for many years. In evidence of this it can be pointed out that in 1869 a substantial majority recommended greatly increasing the capacity of the canal by building double or twin locks, although this enlargement progressed no further than a



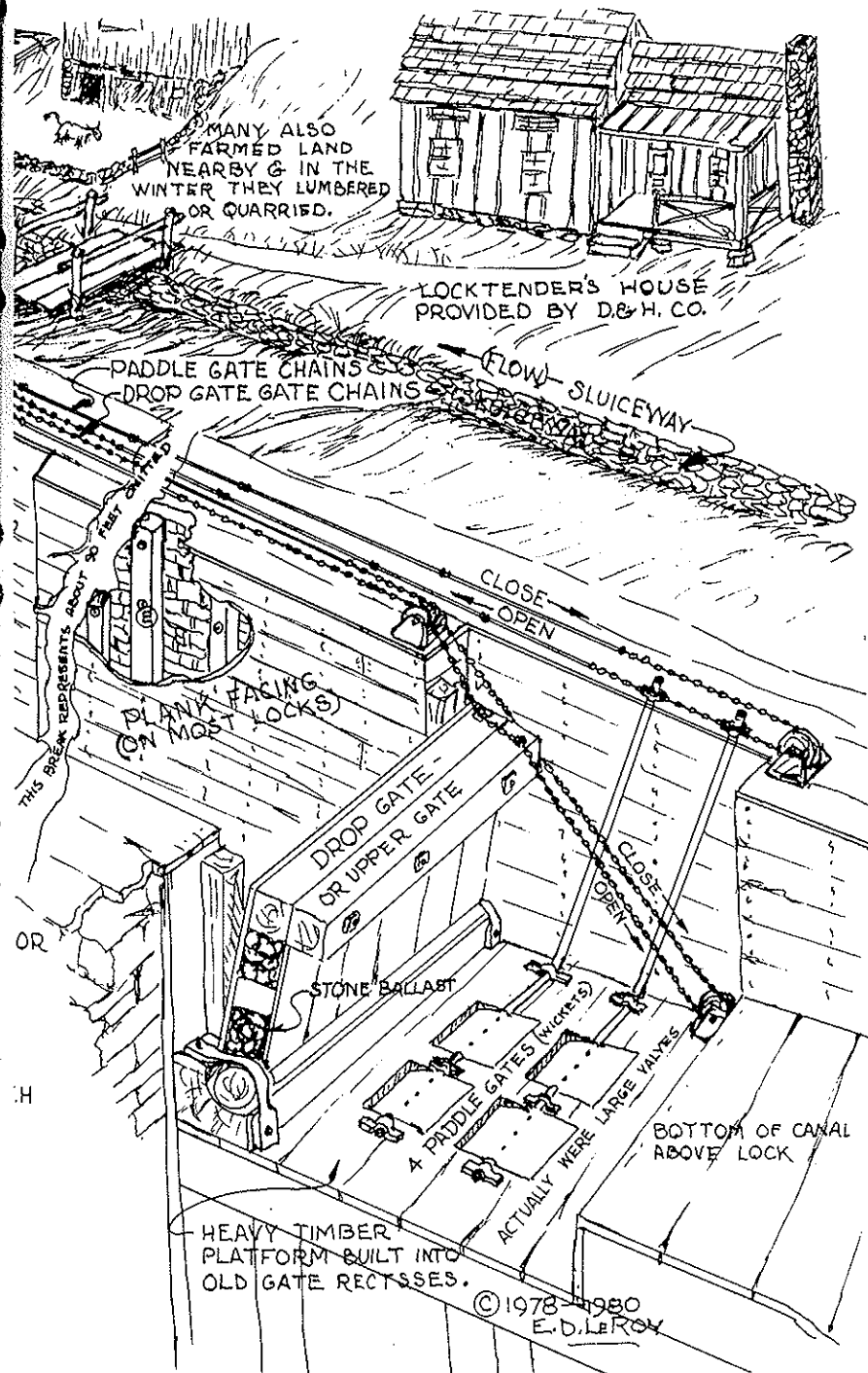
LOCKS 15' X 100' - BOATS 14' X 90'.
THIS MACHINERY, INTRODUCED 1850,
MADE IT POSSIBLE FOR ONE MAN
TO CONTROL BOTH UPPER AND
LOWER GATES FROM THE BRIDGE

Ⓐ LOWER GATE MACHINERY.
Ⓑ DROP GATE MACHINERY - PULLING CRANK
OUT ENGAGED PADDLE GEAR - PUSHING IT
IN ENGAGED DROP GATE GEAR. Ⓒ PADDLE
LEVERS.

WHERE LOCKS WERE CLOSE TOGETHER A CONTRACTOR
WOULD HIRE OTHER MEN TO OPERATE THEM.

THIS SKETCH IS NOT TO SCALE & SOME LIBERTY HAS
BEEN TAKEN WITH RELATIVE PROPORTIONS

Ⓒ CUTAWAY TO SHOW DRY STONE WALL - 6' THICK TO WHICH
TIMBER



MANY ALSO
FARMED LAND
NEARBY & IN THE
WINTER THEY LUMBERED
OR QUARRIED.

LOCKTENDERS HOUSE
PROVIDED BY D & H. CO.

PADDLE GATE CHAINS &
DROP GATE GATE CHAINS

FLOW-SLUICEWAY

CLOSE
OPEN

PLANK FACING
ON MOST LOCKS

DRIP GATE -
OR UPPER GATE

STONE BALLAST

PADDLE GATES (WICKETS)

ACTUALLY WERE LARGE VALVES

BOTTOM OF CANAL
ABOVE LOCK

HEAVY TIMBER
PLATFORM BUILT INTO
OLD GATE RECTSSES.

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E. D. LEROY

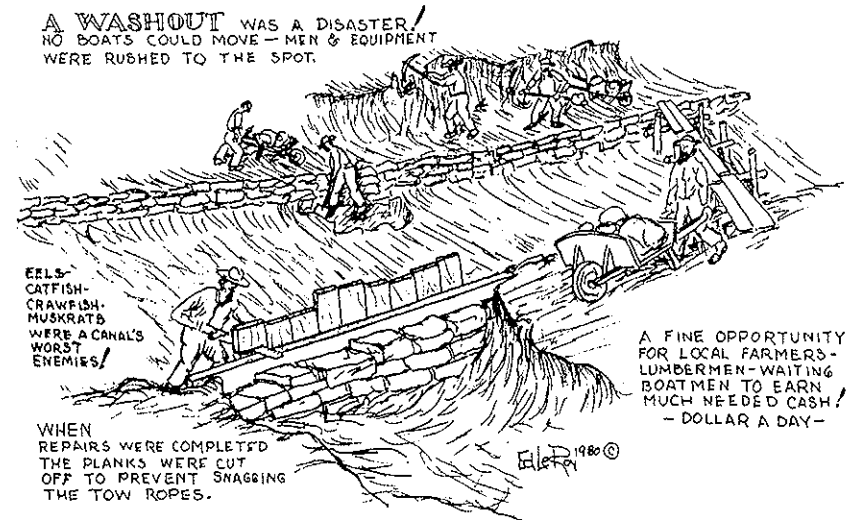
pair of terminal locks at Honesdale.

The Pennsylvania Coal Company continued to ship large quantities of coal through the canal from Hawley throughout 1864, but from that year on their shipments decreased almost to the vanishing point, except for the fulfillment of a few of their contracts, along the canal, which could not be reached by the Erie. The Erie had taken over the franchise for the dormant Hudson and Delaware Railroad, mentioned earlier in this story, and had built a branch line to the Hudson River at Newburgh. Consequently, when in 1865 the Pennsylvania Coal Company began shipping the coal via the Erie they moved their storage yards from Port Ewen to Newburgh. Their towboat "Pittston" which had been hauling their boats from tidewater lock at Eddyville to Port Ewen since 1852 was sold to Thomas Cornell, who placed it in service hauling the D. & H. boats to various points on the Hudson River. The tow boat "Maurice Wurts" owned by the canal company, had been placed in service in 1857 and continued its run, hauling boats between Eddyville and Rondout until 1875 when it was replaced by the "Pittston."

Going back a few years in 1851 we find that the Pennsylvania Legislature had just chartered the "Jefferson Railroad" which was proposed to be built over the Lackawaxen route earlier considered by the Erie. Finding the local political opposition of the Delaware & Hudson Canal Company too strong to overcome directly, Charles S. Miner, an attorney of Honesdale, aided by a number of influential citizens, struck upon the simple subterfuge of using the name "Jefferson Railroad." There being no locality in the vicinity having a similar name, they reasoned, the antagonists would not recognize the bill before the Legislature. They were right, and the bill was passed, but unfortunately for the prosperity of Honesdale, it was never possible to finance the construction of this railroad, but in 1867 the Erie took over the section of the "Jefferson" route between Hawley and Honesdale. The first train over this line was run July 13, 1868. All thought of completing the extension north to Starucca Creek was abandoned when, in 1869, the Delaware & Hudson Canal Company financed the building of the railroad southward from Starucca Creek through the Valley of the Lackawanna rather than down the Valley of the Lackawaxen. The local protests over this change in route, though loud, were of no avail, and the chances of the Lackawaxen Valley towns ever being on the Erie main line seem lost forever.

Additional improvements on the "Gravity" were begun in 1866 and continued through 1869. These were the final improvements of a major nature and left the railroad nearly in its final form. The most important improvement in this final work was the construction of a new "light" track down the mountain westward into Carbondale, giving a continuous down grade of eight miles. This section of track included the well-known "Shepherd's Crook." The track, after reaching an elevation of nineteen hundred and seven feet at Rixe's Gap, swung slightly southerly then, constantly dropping down, maintaining an even grade, the track turned north along the face of the mountain for a distance of a little over two miles, where at the "Shepherd's Crook" it turned to run abruptly south. To make this turn it was necessary to cut into the side of the mountain

and then run out onto a high embankment, thus forming the famous loop which had a diameter of about four hundred feet. This new construction eliminated the need for lowering the light cars as was formerly done at the old planes on the west side of the mountain.



This is probably an appropriate place to give a description of the manner of operating the "Gravity," before returning to the canal. As will be recalled, the original road consisted of parallel tracks at each plane, where each car being lowered counterbalanced one being raised; chains were used briefly, then unweildly hemp ropes, and finally iron wire cables. With the latter there were two cables for each single track plane. One of these was the hoisting cable, the other the tail rope, (or cable) which served to pull the hoisting cable back to the foot of the plane after each trip.

At the foot of each plane was a man whose duty it was to attach each train, or "trip," as it was called, to the hoisting rope. As each "trip" coasted into the foot of the plane, this man fastened the hook, at the end of the first car, to a short chain which was attached to the end of the hoisting rope. As soon as he had thus made the trip secure, he signalled the head of the plane by pulling on a bell wire and the cars were hauled away at a speed of about twenty miles per hour. Each "trip" consisted of five cars, each of five tons capacity.

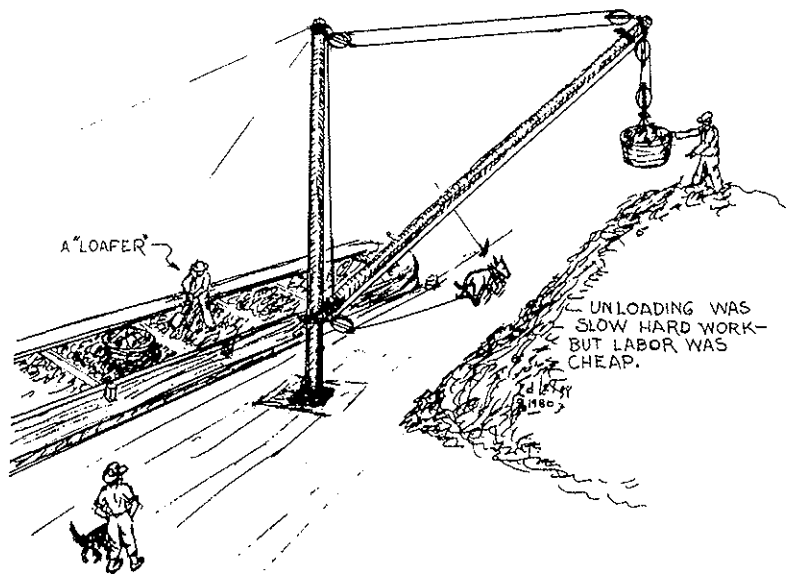
Reaching the "knuckle" (the head of the plane) the brakeman, who rode each trip, unhooked the sling while the cars were still in motion

and the cars then continued on under the force of their own inertia and gravity along the next "level" until the foot of the next plane was reached, and the process repeated until the end of the "trip" at Honesdale.

On the loaded track the descent between the summit and Waymart was so steep (about five hundred feet in two miles) that it was necessary to have machinery to lower the cars. Of course, here no power was required, merely a braking arrangement.

The brakes were located at the summit and were outwardly similar to the mechanism at the head of each powered plane. They consisted of a ten-foot iron drum upon which the ropes were wound and which was geared to a huge eight-bladed fan having a diameter of twelve feet. The fan itself served to retard considerably the speed of the descending cars but in addition around each drum was an iron band which could be tightened by a lever somewhat on the order of an automobile brake.

Regular passenger service was inaugurated over the Gravity railroad between Carbondale and Honesdale on April 5, 1877 and while the road never lost its activity as a coal carrier, it at once became a popular ride for summer tourists because of the scenic beauty of route over the Moosic Mountains. Although a picnic ground was furnished by the company at Fairview, the trains, like the canal, were not operated on Sundays.



Progress dealt the canal another blow when in the fall of 1868 the D & H Company entered into a contract with the Erie Railroad which provided that that railroad should transport the D & H Coal to the

Hudson during the winter months when the canal was closed by ice. From that date on the D & H Company entered into new contracts or leases with numerous railroad companies expanding mostly northward into New York State and the New England states. This expansion and transformation took place so rapidly that after 1872 the company discontinued the publication of statistics on canal traffic. The last of these statistics from the annual report of 1872 is reproduced herewith.

Statement of Tolls received on the Delaware and Hudson Canal and Railroad in each year since the completion of the Works.

1880.....	\$16,422 44	1845.....	\$26,880 92	1859.....	\$ 811,597 79
1881.....	20,554 64	1846.....	26,068 65	1860.....	897,677 99
1882.....	28,717 61	1847.....	38,971 84	1861.....	867,958 56
1883.....	37,004 58	1848.....	46,548 54	1862.....	816,376 97
1884.....	30,946 07	1849.....	34,817 95	1863.....	954,822 67
1885.....	41,976 82	1850.....	97,999 15	1864.....	1,218,570 46
1886.....	45,154 73	1851.....	158,441 96	1865.....	201,679 88
1887.....	44,832 42	1852.....	293,174 67	1866.....	118,482 95
1888.....	40,828 38	1853.....	378,479 83	1867.....	96,530 05
1889.....	40,095 26	1854.....	587,349 52	1868.....	89,846 57
1840.....	36,450 46	1855.....	652,382 94	1869.....	110,172 86
1841.....	39,388 19	1856.....	583,737 86	1870.....	110,268 25
1842.....	33,894 92	1857.....	435,198 44	1871.....	123,836 23
1843.....	30,996 53	1858.....	307,698 11	1872.....	109,786 75
1844.....	33,525 61				
				Total.....	\$8,714,610 91

Statement of Articles transported on the Delaware and Hudson Canal during the year 1872.

	Tons.
Merchandise and Provisions.....	15,944
Plaster.....	349
Cement and Cement-Stone.....	130,558
Tanners' Bark.....	729
Leather and Hides.....	1,690
Stone, Brick and Lime.....	51,521
Iron-Ore, Pig-Iron and Sundries.....	5,938
Mill-Stone.....	456
Staves, Hoop-Poles and Lath.....	4,584
Manufactures of Wood.....	3,927
Glass and Glass-Ware.....	1,010
Bituminous Coal up Canal.....	856
	217,562
Cords of Wood.....	20,913, reduced to tons..... 41,826
Hemlock Shingles.....	436,050, " " 244
Ship Timber and R. R. Ties.....	49,503, " " 1,188

Hard Wood, board mea.....	6,066,808,	"	"	12,013
Fine and Basswood "	789,363,	"	"	1,184
Hemlock, "	9,575,769,	"	"	16,758
	Promiscuous				290,775
	Anthracite Coal.....				1,409,628
Total Tonnage in 1872.....					1,700,408

While to the boatmen and lock tenders of 1872 no change in the attitude of the managers was apparent, it is strikingly obvious today, reviewing the company's records from year to year, that railroads had superseded the canal in their interests for from that year until the final abandonment of the canal, twenty-six years later there are only brief infrequent references to the canal. The D & H boatmen were by no means so fickle and no railroader ever had the affection for his calling that the average canaller, be he otherwise callous, had for his.

One of the greatest handicaps of any canal in competition with railroads is its inability to operate during the winter months for the merest film of ice made it impossible for the mules to move the boats. The Delaware and Hudson Canal, reaching as it did into the mountains of northeastern Pennsylvania was closed for five months of each year. Usually the boating season began during the early part of May and closed in early December. Another was the maximum speed of three miles per hour attained by the plodding mules and the time lost in passing through the locks.

Even had the mules been able to move the cumbersome, blunt-nosed canal boats at a faster pace, it could not have been permitted, for the wash thrown up by boats moving at a greater speed would have caused the canal banks to cave in. The only solution would have been concrete or masonry walls the full length of the canal. In the one hundred and eight miles of canal there were one hundred and six locks, each with an average lift of ten feet. The boats fitted into these locks like a hand in a glove and there was, of course, considerable time lost in getting the boats into the locks and in overcoming the inertia of the loaded boats, particularly when starting out of a lock, so that the actual work of lockage required the less time. The whole operation consumed no less than twelve minutes, actual lockage as low as six.

It is easily apparent that locks having a greater lift would take little or no more time to operate than those in use. Consequently, had the board of managers approved the construction, at High Falls, Neversink, Lackawaxen, and the Narrows, of new but fewer locks, each having a greater lift, the cost of operation and time of navigation would have been materially reduced, but as the railroads took more and more prestige away from the old waterway it became increasingly less practicable to make the improvements which might have given the canal a longer lease on life.

Two remaining disadvantages hampered the D & H: The Moosic Mountains remained a barrier between it and the mines, requiring the double handling of coal by means of the Gravity railroad. Finally, after traveling one hundred and eight miles to tidewater, the canal terminated but a few miles nearer the New York markets than was its starting point at Honesdale.

The last twenty-five years of operation of the canal were uneventful from the standpoint of change. The canal people themselves had settled down to the serious business of hauling coal and freight.

The following summary of the canal, while it is for the year 1880, will suffice for the ^{FINAL} year of operation:

Locks: 107 (including double lock at Honesdale), 95 composite, 12 stone and cement masonry, 100 feet in length between gates 15 feet wide.

Feet of Lockage: 1086, including 58 feet at Neversink.

Weight Locks: 2 of stone and cement masonry.

Stop Locks: 2 stone masonry ends.

Guard Locks: 2, one masonry, one composite.

Aqueducts: 22, 4 wire suspension, 18 wood trunk. 2,000 lineal feet aqueduct superstructure.

Waste Weirs: 110—105 stone masonry, 5 timber and plank.

Canal Feeders: 14—2 wood, 12 earth trunk. Total 3½ miles.

Feeder dams: 16—4 stone masonry, 10 timber and plank. 2 stone and brush.

Drydocks: 2, leased, not operated by company. (There were numerous others of varying sizes privately owned.)

Bridges: 136 highway and farm bridges. 5 have wrought iron superstructure.

Tow path bridges: 37—1 crossing Lackawaxen at Honesdale. (5 span wrought iron.) 26 crossing aqueducts, 10 crossing feeders.

Reservoirs: 22.

Boats: 915 canal boats, 66 transfer boats, 3 freight line boats, 16 barges, 2 wrecking boats, 1 propeller boat and 1 dredging machine. In addition to these boats there were, of course, an uncounted number of boats which had been privately built.

THE locks on the D & H were numbered in order westward from Rondout to Lackawaxen and from Lackawaxen to Honesdale. For the most part the boatmen referred to the lock by some name which was derived from the proprietor or from some peculiar feature nearby. The most common names were: 1—Eddyville, 2 to 4—Creek Locks, 5—Milban's, 6—Websters, 7—Rosendale, 8-9—Lawrenceville, 10—Humphreys, 11—Cole's Basin, 12-14—Nigger Locks, 15-20—High Falls, 21—Alliger-ville, 22—Foleys, 23—Stony Kill, 24—Middleport, 25—Port Hickson, 26—Port Benjamin, 27—Bob Decker's, 28—Chris Ginnel's, 29—Shirley's,

30-31—Ellenville, 32—Sam Taylor's, 33—Youppy's, 34—Ostrander's, 35—Callahan's, 36—Penny's, 37—Mose Charles', 38—Louie Beardsley, 39—Joe McKane, 40—Hank Woods, 41—Jack McCarthy, 42—Bill Foster, 43—Bill Robinson, 44—Dan Hanion, 45—Enoch Rogers, 46—Huck Rogers, 47—Will Donnelly's, 48—Will Halstead's, 49—Wm. E. Rose's, 50—P. O. Callahan's, 51-55—Neversink, 56—Mineral Springs, 57—Butler's, 58-59—Mongaup, 60—Woolsley's, 61—Pa Gene Smith's, 62—Widow Kelly's, 63—Pond Eddy, 64—Squire Van Tulyer's, 65—Decker's, 66—Lambert's, 67—Handsome Eddy, 68—Barryville, Lower 69—Barryville, Upper, 70-71-72—Gilson's Locks.

Here the canal crossed the Delaware and Lackawaxen Rivers. The first three locks on the Lackawaxen were abandoned after the completion of the aqueducts. 4-5-6—Ridgeway's, 7—Joe Tague or Tinsmiths, 8—O'Donnell's, 9—Bishop's, 10—George Rowland's, 11—Saxon's or Larson's, 12—Westfall's, 13-14—Griswold's, 15—Jim Avery's, 16—Corkonian's or Chidesters, 17—Rodgers, 18—Jim Hanner's, 19—Abe Rowland s. 20—Pat Gannons, 21—Field Bend, 22—Mike Harrison's, 23—Jim Harrison's, 24—Frank Danniell's (Pat Harrison), 25—Poolpit, 26—Baisdens, 27—Carroll's (Billy O'Brien), 28—Rock Lock (Mike Connors), 29—Lower Hawley (Conklin's), 30—Upper Hawley (Hennessy's), 31—Wier's (O'Han's), 32—McKahill's, 33—White Mills, 34—Lonsome Lock (Dan Carroll), 35—Tom Whitaker's, 36—Chris Lane's (Miles Bishop), 37—Honesdale-Twin Locks.

It should be born in mind that no two such lists of names would be the same, but those given seem to have been the most common in the last years of the canal.

The accompanying reproduction of "Rules for Government of Lock Tenders", together with the "Rules, Regulations and By-Law", covered any contingency which might arise and were for the most part adhered to.

The lock tender was responsible for the level of the water in the sections of canal below his lock, regardless of the head of water above his lock. That was the responsibility of lock tender next above him. A certain amount of water passed through each time a lock was emptied, but, except in the dry seasons there was a continuous flow of water through the sluiceway which bypassed each lock.

In addition to the feeders, which drew water from the river, the canal was fed by brooks or springs which emptied into it. It was necessary to control the flow of this water through the erection of wasteweirs, usually opposite each brook or spring. By raising or lowering the planking at these wasteweirs, a proper boating head was maintained. A flow of water through the canal greater than a half mile per hour would have caused serious damage to the banks.

The operation of the locks became an art in itself and was accomplished quickly and efficiently. As has been pointed out locking through required less time than bringing the boat into or out of the lock. Originally the gates on all of the locks were the balance beam type, and each was operated independently by hand, but in 1865 the upper gates were replaced

RULES FOR THE GOVERNMENT OF LOCK-TENDERS ON THE Delaware & Hudson Canal

1882  1882

1. The Locks are to be closed between the hours of 11 on Sunday night and 12 o'clock on Monday night, and open for the passage of Boats and Flats during other hours, night or day, as directed by the officers on the Canal. The competent man is to be constantly on attendance at the Lock during the hours the Lock is directed to be opened for the passage of Boats, and be vigilant in enforcing the Rules, Regulations and By-Laws for the navigation of the canal, and facilitate the passage of Boats and Flats in a prompt, careful and business manner. The contractor for a Lock will be held liable for the faithful performances of any person he may employ as a Lock-Tender.
2. No boat or Flat is to be allowed to pass a lock next after leaving a Collector's office without exhibiting a Clearance or permit, which is to be retained by the Lock-Tender of the last Lock through which said Boat or Flat is to pass, (unless it be a Lock next to a collector's office,) which permit the Lock-Tender is to forward to the next Collector toward which the Boat or Flat shall be progressing.—*See Rules, Regulations and By-Laws.*
3. The Lock-Tenders are to certify the place of starting or landing of every Boat or Flat which starts or takes any article on board, at or near the Locks in their charge, and send a Collector's office; being particular to give the date, name of the boat, the number of the Lock, and the place of discharge above or below said Lock where the Boat or Flat started or took any freight on board. Each certificate is to serve as a receipt through the Locks that intervene between such Lock and place and the next Collector's office; but shall not serve as a pass through a Lock after said Boat or Flat shall have passed a Collector's office.—*See Rules, Regulations and By-Laws.*
4. The Paddle Gates are to be used in the usual manner and was not to create injurious swells on locks between Locks. When there is a full flow of water on the upper level, and the level below is not above a falling level, Boats may be swung out of the Lock, but with the most economical use of water, and vigilance.—In cases of ice when those in charge of a Boat neglect or refuse when required, to make their Boats draw a Boat out of a Lock promptly, without a swell from the paddle work, Boats must be reported to the proper officer, and the penalties rigidly exacted.
5. Lock-Tenders are to make themselves familiar with the Rules, Regulations and By-Laws for Navigating the Canal, explain them to the Boatman, and enforce them rigidly in a kind and friendly manner, so to insure promptness to the Locks. They will require every Boat or Flat to be loaded and held ready to leave the lock and stern tow before opening a paddle gate. They are to keep careful watch of the Boat or Flat, and not to open the paddle gate until the Boat or Flat is properly held, or so as to cause an unnecessary swell of water upon the levels to ground tracks lying near a Lock.—*See Rules, Regulations and By-Laws.*
6. Lock-Tenders are to be vigilant in their watch and not to permit any Boat or Flat to pass their Locks without having a proper clearance or permit, and report immediately to the nearest Collector or Superintendent the master of any Boat or Flat that shall discharge from on board any articles which are not entered on the permit or clearance, or in any manner attempting to defraud the Collector in the payment of tolls.—*See Rules, Regulations and By-Laws.*
7. Lock-Tenders are not required in all cases to examine the permits of Boats engaged in transporting Coal, unless they should have other freight than Coal on board. But this is not to excuse the master of a Boat for not exhibiting his permit when it shall be demanded.
8. Boats or Booms engaged in improving or repairing the canal are to have the privilege of passing through Locks when the Boat or Boom does not impede the first opportunity to pass a Lock, and delays until another comes within backing distance, the last one shall have the preference in passing the Lock.—*See Rules, Regulations and By-Laws.*
9. Lock-Tenders who by inattention or neglect shall detain a Boat or Flat, so as to incur the penalty of the Law, shall be dismissed and also be liable for such penalty and cost.—*See Rules, Regulations and By-Laws.*
10. Lock-Tenders are strictly required to keep the levels below the Locks under their charge at the height directed by the Superintendent or other officer of the Canal.
11. Lock-Tenders are required to keep their Locks in good order, the embankments clear from lumber or anything to prevent the free and clear passage on both sides of the Lock for the business of navigation, they are to watch the banks near their Locks, and when a breach is threatened, to take prompt measures to prevent it, and also to give the Superintendent or other officer prompt notice thereof in all any breach that may have occurred. During the same they are to be vigilant, and render all reasonable assistance to open a water weirs, to draw off water, or to protect the Canal's locks and property of the Company as the case may be.
12. When a breach or leak has occurred so as to stop navigation, Lock-Tenders are to be notified in the direction of the Superintendent or other officer, without delay, to repair it.
13. No occupant of a Lock-House is allowed to sell, or to give any property, which may be left at or near their Locks, that belong to the Company, any swell of water upon the levels to ground tracks lying near a Lock.—*See Rules, Regulations and By-Laws.*
14. Lock-Tenders are expected to take charge of the work of their property, which may be left at or near their Locks, that belong to the Company, any swell of water upon the levels to ground tracks lying near a Lock.—*See Rules, Regulations and By-Laws.*
15. Lock-Tenders are to keep the Levels and Landings properly cleaned and in good order, and have them mended so as to maintain a free passage for Boats to pass them, and when they start, to let them pass the Lock in the same order as they came up, providing they shall be ready to improve their turn.—*See Rules, Regulations and By-Laws.*
16. Whenever Boats are detained by a breach or otherwise, so as to collect together, Lock-Tenders are to take the number of the order as they arrive, and have them mended so as to maintain a free passage for Boats to pass them, and when they start, to let them pass the Lock in the same order as they came up, providing they shall be ready to improve their turn.—*See Rules, Regulations and By-Laws.*
17. Lock-Tenders are to notice and report immediately to some officer on the Canal any breach or anything to prevent the free and clear passage on both sides of the Lock for the business of navigation, they are to watch the banks near their Locks, and when a breach is threatened, to take prompt measures to prevent it, and also to give the Superintendent or other officer prompt notice thereof in all any breach that may have occurred. During the same they are to be vigilant, and render all reasonable assistance to open a water weirs, to draw off water, or to protect the Canal's locks and property of the Company as the case may be.
18. Lock-Tenders are to notice and report without delay the Master of any Boat in the Coal business that is intoxicated or otherwise incompetent to manage his Boat in any Strait or dependent on the Canal, and are not to let any Boat that may be engaged in business for the Delaware and Hudson Canal Company pass through a Lock unless it has a competent crew of three male persons, without written permission from an officer in the employment of the Company, and they are to report every Boat that may be engaged in other business, which does not have such a crew.—*See Rules, Regulations and By-Laws.*
19. A Liberal Reward will be paid to any person that informs to the conviction of any Master of a Coal boat, that has been found doing any thing along the Canal, or has any loading materials on board said Boat in violation of the Rules, Regulations and By-Laws, for the navigation of said Canal.
20. The foregoing Rules, together with the general Rules, Regulations and By-Laws for the navigation of the Canal is copy of which will be furnished them are to be strictly adhered to, and to be enforced by Lock-Tenders, unless otherwise directed by some officer of the Delaware and Hudson Canal Company on the Canal for the time being, and they will be discharged immediately for negligence or non-compliance. Any person who is negligent or non-compliance with any provision of the foregoing will be discharged from their employment on the Canal for the time being.

COE F. YOUNG, General Manager.

Office of the Delaware & Hudson Canal Company.
HONESDALE, APRIL, 1882.

by drop gates, and hand operated machinery, by which both the upper and lower gates could be operated, was installed.

The drop gates were hinged at the bottom and so weighted that when the lock was full they could be allowed to drop backwards into the bed of the canal. With this gate down the boat slid over it into the lock. When the boat was safely snubbed the lock-tender, from his shanty over the lower gates, "cracked" the "paddles" of the lower gate (i. e., opened them slightly) and at the same time turned the winch which started the upper gate from its resting place. The current created by cracking the paddles was sufficient to cause the drop gate to rise into place without much further effort on his part. The winch was tightened and the dog (or ratchet) dropped into place on the cog, thus holding it securely. The paddles (they were called wickets on some canals) in the lower gate were opened fully and the water boiled out below the lock. These paddles were below the surface of the water, so as to cause as little erosion as possible. When the water within the lock thus reached the level of the water below the lock, the lower gates were opened and the boats passed on out. When there was an abundance of water, the lock-tender could speed up the passage of a boat by partly opening the paddles beneath the upper gate, thus causing a swell of water upon which the boat rode out of the lock, attaining full speed within a hundred feet.

The canal company owned half an acre or so of ground adjacent to each lock on which was built a house for the use of the contractor who was responsible for the operation of the lock. Often the operation of the lock was kept in the family but in many cases an outsider was hired as locktender. More often the contractor himself also ran a farm, did lumbering or quarrying or probably he ran a store.

Maintenance Problems

Maintenance of a canal presents its own peculiar problems compared with which the problems of a railroad are trivial. It is one thing to dig a ditch and another to keep it filled with water and anyone who has ever seen the havoc caused by a single heavy summer downpour on a country road, not to mention a spring flood can appreciate the irresistible power of water. In the valley of the Neversink the builders of the D & H encountered porous, gravelly ground which would not hold water. During the first years this difficulty caused a great deal of annoyance until it was finally overcome by lining that entire section, sixteen miles, with clay.

The use of "sitting poles" or pikes was strictly forbidden for their sharp points, driven down into the bed of the canal, elevated as it was above the river, would be certain to puncture the lining and the smallest leak thus started soon became enlarged and if not repaired promptly, a wash-out was inevitable. As a precaution against such an occurrence, which could tie up the whole canal for days, the tow-path walker or watchman was an invaluable man. It was his duty to repair small leaks whenever possible. This was usually done by plugging the hole with stones or twisted straw or both. On top of this he rammed down some convenient sod or clay, probably tramping it down with his feet.

Poles of the boatman were by no means the only cause of such leaks,

for eels, catfish, sometimes moles, and even crawfish were the cause but probably the greatest enemy were the muskrats who found the canal an ideal home. Liberal bounties offered for killing them seemed only to make those which remained more determined.

A leak which threatened to become a washout called for the attention of the emergency crew. Their scow was loaded with timber for piles and planks for coffer dams as well as wheel barrows, shovels, and all the necessary tools. These scows had the right of way over all other traffic and were easily reached by the D & H telegraph. Where a breach of wash-out had occurred, a temporary dam was built across the breach and the canal again placed in operation. This dam was built by driving piles and facing them with grooved planking which, when watersoaked, soon became watertight. Behind this dam the washed-out section was then rebuilt but the dam remained in place to give the new work time to settle and become watertight before being subjected to pressure.

With these physical handicaps to be overcome, and with the board of managers almost wholly absorbed in the great railroad expansion, the Delaware and Hudson Canal continued its useful life as a coal carrier until November 5, 1898, when boat number 1107 in command of Captain Frank Hensberger left Honesdale for Rondout.

The famous old "Gravity" was continued in operation until January 3, 1899, and on April 28 of that year the New York Legislature formally approved the abandonment of the canal in that State. On June 13, 1899 the entire canal with "all its franchises, rights and privileges" was sold to S. D. Coykendall, president of the Cornell Steamboat Company, for the sum of \$10,000.

Thirty-five miles of the lower end of the canal were operated during 1899 for the purpose of handling local freight. One of the last boats to navigate this section was the "Ulster Queen"; another, probably the last of all, was captained by Chara Van Inwegen.

Early in 1899 the Delaware Valley and Kingston Railroad was chartered for the expressed purpose of constructing a railroad over the route of the canal from Kingston to Lackawaxen, there to connect with the Pennsylvania Coal Company's road and thus deprive the Erie Railroad of that company's traffic. The Erie acting quickly to defeat this scheme, purchased outright the railroad property of the Pennsylvania Coal Company which it had operated under a lease agreement and as a further safeguard, bought up the right of way of the canal, thus preventing any competitor from building over a parallel route. This was the final disposition of the corpse of the old canal.

Most of the boats on the canal at the time of its abandonment were taken to Rondout or some convenient place for disposal and a great many were used for years as barges on the Hudson River. Some few were abandoned at various places along the canal where they slowly rotted, leaving their bones exposed; the last remnants of a once great enterprise.

Rules for Navigating the D&H Canal

SECTION 1. All boats not built agreeably to the model of the boats of the Delaware and Hudson Canal Company, or a pattern approved of by the agent of said Company, and all boats deemed by a superintendent or collector on the canal as being out of repair and in condition to sink or in any way obstruct the navigation of the canal, will be charged legal tolls, or may be prohibited from navigating the canal at the option of the Company made known by its Agent, Engineer, Superintendent or Collector, to the owner or Captain of such boat.

SEC. 2. Every boat shall have her name and the place where owned painted in letters not less than four inches in height on a permanent part of the boat, so as to be conspicuous from both sides of the canal which shall not be changed during the season of navigation without the consent in writing of an agent of the company. The boat shall be kept properly ironed and smoothed on the bottom so as not to catch lines when passing over them under a penalty of \$5 for every violation of either of the requirements of this section.

SEC. 3. Every boat or float shall be towed by an efficient horse or horses, so as not to unnecessarily impede the passage of other boats or floats; shall have an orderly crew of at least three male persons, one of which shall be with and in charge of the horse or horses at all times when under way, and shall have a conspicuous light on the bow at all times when moving during the night, under a penalty of \$5 for every violation of either of the requirements of this section.

SEC. 4. The crew of a boat or float shall remain with it all the time it may be passing through a lock; shall snub with both bow and stern lines and not let the boat or float go against the gates. They are not to open or shut the paddle gates, or in any way interfere with the lock gates without the permission of the lock tender; they shall hold their craft in an efficient manner so as not to impede the movements of the lock gates; they shall draw with their

horse or horses in or out of the locks as the case may be, with proper despatch; and comply with the directions of the lock-tender in regard to all matters pertaining to their passing through locks, and not in any way obstruct the passage or unreasonably hinder other boats or floats passing in, through or out of locks under a penalty of \$5 for every violation of either of the provisions of this section, and be liable for all the damage which may accrue in consequence of such neglect or violation.

SEC. 5. All boats or floats when waiting for a passage through a lock shall lay on the berme side of the canal, unless otherwise directed by a lock-tender, and allow a clear passage for any boat or float that may be passing in or out of said lock. A boat or float below when the lock is empty or above when full if within 500 feet shall pass through such lock before another boat or float that may be on the opposite level unless otherwise directed by the lock-tender. No boat or float shall be laid up or moored at any time within 150 feet of a lock without permission of the lock-tender, and at no place on the line of the canal, so as to obstruct the free passage of other boats or floats, under a penalty of \$10 for every violation of either of the provisions of this section. The person having charge of a boat or float shall when within a quarter of a mile of a lock blow a horn as a signal to the lock-tender, under a penalty of one dollar for every neglect thereof.

SEC. 6. No boat or float shall run alongside of or pass any other boat or float that may be within twenty rods of a lock towards which said boats or floats may be progressing without permission of the lock-tender; and every boat or float which neglects to improve the first opportunity for passing a lock, shall lose its preference, and be subject to the directions of the lock-tender, under a penalty of \$5 for every violation of either of the provisions of this section.

SEC. 7. No boats or floats shall be moored on the tow-path side of the canal, or any lading be taken on board from, or be discharged on the tow-path without special permission from an authorized person, in the employment of the Delaware and Hudson Canal Company, and then a competent person shall be on board to pass over lines and

not impede in any way the passage of boats or floats. No boat or float shall be snubbed or fastened to the superstructure of the wire suspension aqueducts, or any bridge or protection railings along the canal, under a penalty of \$10 for every violation of either of the provisions of this section, and a further liability for all damage that may accrue in consequence of such violation.

SEC. 8. When boats or crafts navigating the canal meet, not at a lock, those going from tide water shall keep the tow path side, and those going towards tide water shall drop their line and pass on the berme side, and both give every facility for passing. When any two boats passing from different directions approach a narrow place in the canal, which will not permit their passing each other, the boat going from the Hudson River shall stop at a suitable distance while the other shall pass such narrow place, under a penalty of \$10 for every violation of either of the provisions of this section.

SEC. 9. No boat or craft shall pass along the canal at a faster rate than three miles an hour; but every person having charge of any boat or craft when overtaken by another, unless within twenty rods of a lock, shall drop his line and afford reasonable facility for such craft to pass by him, without reference to the rate they may be driving, under the penalty of \$10 for every violation of either of the provisions of this section.

SEC. 10. Any person who shall obstruct the navigation of the canal by means of loading or unloading his vessels, or by misplacing or mismanaging the same, and shall not immediately, upon being requested by the lock-tender, or by any person incommoded by such obstruction, remove the same, shall subject himself to the penalty of \$5 and the expenses necessary and requisite for removing such obstruction.

SEC. 11. Any person who shall obstruct the navigation of said canal by sinking any vessel, coal, stone or other substance to the bottom of the canal, or by placing such obstruction upon or against either of the banks of the said canal, shall forfeit and pay the sum of \$20, and the expenses necessarily incurred in removing such obstruction, and failing to pay on demand, shall be prosecuted according to law.

SEC. 12. Any person who shall wantonly or unnecessarily waste the waters of said canal by opening any lock-gate, paddle-gate, or waste-wiers, or who shall maliciously injure the gates, locks, culverts, bridges, fences or other works of the same, or impair the free use of such locks, or other works, or damage or injure the same, shall forfeit and pay to the said company, four times the amount of damages by them sustained, together with the costs of suit to the utmost vigor of the law.

SEC. 13. Any person throwing the carcass of a dead animal or other putrid substance into the canal or any basin or feeder, or on any bank connected therewith shall forfeit and pay the sum of \$5; one half of which shall be paid to the informer, after the same shall have been collected from the offender.

SEC. 14. Any person navigating the canal by means of setting poles or shafts, shall forfeit and pay the sum of \$5 for every twenty miles so navigated, and in the same proportion for a greater or less distance; nor shall any setting poles or shafts, pointed with iron or other metal, be used or carried in any boat navigating said canal, under a penalty of \$10.

SEC. 15. Any person who shall drive any wagon, carriage or other vehicle, or lead or drive any horse, mule or other cattle, upon the tow-path or berme bank of said canal except in going to or from their boats for the purpose of transportation upon the canal, shall forfeit and pay the sum of \$5, and be liable to prosecution for trespass and all damages.

SEC. 16. Every person having charge of any boat or raft **that shall take on board his boat or raft, or otherwise break down or destroy any fence or fencing materials belonging to the fences along the canal, or have any such fence rails, boards or materials on board his boat or raft, not properly entered on their permit or clearances as freight, shall forfeit and pay the sum of \$5 for every violation of either of the provisions of this section, and be liable for all damages that may occur in consequence of such violation.**

SEC. 17. Every person having charge of any boat or raft on said canal, shall make and furnish a full, detailed report

of his cargo (exhibiting his bills of lading) to the most convenient collector at the commencement of the trip, giving a just account in writing signed by such person, (a duplicate of which he shall also sign in the Collector's office) containing a statement of the weight and description of all property on which toll is charged by the ton; and of the number of articles on which toll is charged by the foot; together with the name of the boat and the name of the person having charge thereof, where and by whom owned, the place from which such property is brought, and where the same is to be landed; and all other particulars according to the printed blanks in use along said canal; and at his arrival at every subsequent Collector's office in the progress of his trip, it shall further be his duty to deliver to the Collectors a similar detailed list of all articles that may have been taken on board subsequent to his leaving the last Collector's office. Every such person offending against either of the provisions of this section, shall forfeit the sum of \$25.

SEC. 18. In every case where, upon a critical examination the cargo of any boat or contents of any raft, navigating said canal, shall be found to be falsely represented, as being of less amount or consisting of articles of lower rate of toll, or be carried a greater distance than is set forth by the person having charge of such boat or raft, the person so offending shall forfeit and pay for every box, barrel, or other article not weighing more than 5 cwt. the sum of \$5;

and if weighing more, \$20. And every such person so having charge of any boat or raft, who shall pass the Collector's office without paying the regularly assessed tolls upon such cargo, shall forfeit and pay for every time he shall so pass by any such office, the sum of \$20, over and above the tolls on such boat or raft.

SEC. 19. Every person having charge of a boat or raft transporting articles taken on and distributed along the canal, between the Collectors' offices, shall procure a certificate of the same from the tender of the first lock he may pass after taking such articles or freight on board; and if he does not proceed to a Collector's office he shall leave such certificate with the tender of the last lock through

which he passes under a penalty of \$5, when the toll on such freight amounts to less than one dollar, and a penalty of \$10 when the toll shall exceed one dollar for every violation of this section.

SEC. 20. Upon payment of the proper toll assessed upon any boat or cargo, or upon any raft, a clearance will be given to any person having charge thereof, which he is required to present at every Collector's office during his trip, and also to the tenders of the locks, when he will thereupon be allowed to pass. And such clearance is to be delivered to the Collector of the last office he shall pass in the course of his trip, and in lieu of which he will receive a permit for passing the subsequent locks, which permit he is to deliver to the tender of the last lock through which he passes under a penalty of \$20 for every violation of either of the provisions of this section.

SEC. 21. In all cases when a violation of these Rules, Regulations and By-Laws has occurred, and penalties incurred remain unpaid, the boat or craft so violating them will be deemed liable, and may be detained under the direction of a collector or agent of said Company until full payment has been made, without reference to time, place, change of cargo, or of ownership of either boat or cargo so detained.

No. 916



Del. & Hud. Canal Company's Collector's Office,
Hawley, Aug. 29 1860

Under and subject to the Rules, Regulations and By-Laws for the government of the Canal, Permit

Boat 531 to the P. Coffey

Master, to pass to Eddyville, with cargo of 114 1/2
Tons, Lump & Coal, for Pa. C. Co.

Toll, 48 5-8 Cents per ton on account, \$ 55.50

Draught, 60 — ins. S. J. Bond Colr.

TABLE OF DISTANCES

ON THE

DELAWARE & HUDSON CANAL,

SHOWING THE
Divisions and Sections, Counties, Telegraph Calls, Numbers of Locks, A.C. and the Location of Aqueducts, Feeders, Stop-Gates, Waste-Weirs, &c.

ARRANGED FOR THE INFORMATION OF THE TELEGRAPH DEPARTMENT, BY CHARLES PETERSEN, SUPERINTENDENT.

NAMES OF PLACES	Telegraph Call	Miles from Philadelphia	Miles from New York	No. of Locks	Remarks	County
HONESDALE	H	108	37	Rk. Main Battery, Feeder.		
HOLBERTSVILLE		107	36			
BEARDELL'S BASIN		104	33	Aqueduct		
BEACH PLAY		103	32	Feeder		
WHITE MILLS	CU	103	32	RR		
BRINK'S DAM		102	31			
GANVILLE		102	31			
NEWCASTLE		100	29	RR		
TUMBLEBAM ROCK	RY	100	29	Feeder		
POOLPIT		99	28			
SPRING CAMP		98	27			
NARROWS		97	26	RR		
SWYDER'S EDDY		96	25	Feeder		
ARMEN'S EDDY		95	24			
BLUE EDDY		94	23			
SOUTH OF BLOOMING GROVE		93	22	RR		
BLOOMING GROVE ISLAND		92	21			
CRISWOLD	OU	92	21	RR Aqueduct		
WELLS		91	20	RR		
HOWLANDS		90	19	RR		
FORT HOWARD		89	18			
LITTLE NARROWS		88	17			
HIDON		87	16			
LACKAWAXEN	IN	84	13	Rk. Aqueduct		
DELAWARE AQUEDUCT		83	12	Delaware Feeder		
STOP LOCK		82	11	Four Mile Level		
BEAVER BROOK		81	10	Aqueduct		
FATHER BROOK		80	9	RR		
BARRYVILLE	H	79	8	RR Stop Gate		
MITCHIE		78	7	Waste Weir		
HENNINGER EDDY		77	6			
DUTTERNILE FALLS		76	5			
CRANVILLE		75	4			
VAN TUYLE'S BASIN		74	3			
VAN TUYLE'S BROOK		73	2			
MON EDDY	WM	72	1			
JACKSON'S DOCK		71	0	RR		
FISH CABIN		70	0	RR		
VAN AUKEN'S BRIDGE		69	0	RR		
STAIRWAY BROOK		68	0	RR		
DICKERSON'S EDDY		67	0	RR		
MONCAUP	MP	66	0	RR Feeder, Aqueduct		
BUTLER'S FALLS		65	0	RR		
BOLTON BASIN		64	0	RR		
HONESVILLE		63	0	RR		
REARHOUSE		62	0	RR		
WESTFALL'S BASIN		61	0	RR		
POR JERRY'S	ED	60	0	RR		
BEN JUDEN'S		59	0	RR		
FINE WOODS		58	0	RR		
BIRD'S ROCK		57	0	RR		
HORNBECK'S CULVERT		56	0	RR		
HOOPER'S DOCK		55	0	RR		
HAN ETTER'S BRIDGE		54	0	RR		
FORT CLINTON		53	0	RR		
NEVER CRANK AQ.	V	52	0	RR		
CLUBBACRE MILLS		51	0	RR		
VAN INGLEW'S BASIN		50	0	RR		
STATION'S BASIN		49	0	RR		
WESTBROOKVILLE	WB	48	0	RR		
INDIAN SPRING		47	0	RR		
OAK BROOK		46	0	RR		
BROWN BASIN		45	0	RR		
MANLERA SMITH'S		44	0	RR		
GRADY'S DOCK		43	0	RR		
ARZEE'S DAM		42	0	RR		
WURTSBORO	Wb	41	0	RR		
YORKVILLE		40	0	RR		
LOO MOORE		39	0	RR		
BEATYBORO		38	0	RR		
DAVIS		37	0	RR		
PHILIPSPORT	SU	36	0	RR		
COUNTY LINE		35	0	RR		
BENNY'S BASIN		34	0	RR		
JARED RITTER'S		33	0	RR		
BRODHEAD'S BRICK-KILN		32	0	RR		
CUTLER'S BASIN		31	0	RR		
TELLERVILLE	TF	30	0	RR		
DECLINE		29	0	RR		
TERWILLIGERS		28	0	RR		
KAPANOCH		27	0	RR		
MORT BENJAMIN		26	0	RR		
FORT HUTTON		25	0	RR		
MIDAN'S BASIN		24	0	RR		
MIDDLE PT. (Aeroback)	MI	23	0	RR		
MOUNTAIN BROOK		22	0	RR		
C P HORNBOXT		21	0	RR		
DAVID VERNOOT'S		20	0	RR		
PORT JACKSON		19	0	RR		
JOHN ELLIOTT		18	0	RR		
FREELANDS		17	0	RR		
JOHN BERRY'S		16	0	RR		
ALLICERVILLE	VI	15	0	RR		
STYDENVILLE		14	0	RR		
CLOY CHURCH		13	0	RR		
HABERBUCK'S		12	0	RR		
HIGH FALLS	IF	11	0	RR		
CULP'S DAM		10	0	RR		
LAWRENCEVILLE		9	0	RR		
ROSENDALE	RA	8	0	RR		
LEWIS'S FALLS		7	0	RR		
WARDENBURG		6	0	RR		
CREEK LOCKS	CR	5	0	RR		
HORNBECK'S BRIDGE		4	0	RR		
GREENHILL		3	0	RR		
EDDYVILLE	DE	2	0	RR		
RODSBOUT	RD	1	0	RR		
RODSBOUT, D. & N. Co. Private O.Cs.						

Collector's Office. 1 Suspension Aqueduct. Bridge Two-pass, from Lock 12 to Lock 20. 2 Junction of Waukill and Rodsout Creeks. 3 Boat pass three miles through Rodsout Creeks. 4 Boat pass three miles through Rodsout Creeks. 5 Boat pass three miles through Rodsout Creeks. 6 Boat pass three miles through Rodsout Creeks. 7 Boat pass three miles through Rodsout Creeks. 8 Boat pass three miles through Rodsout Creeks. 9 Boat pass three miles through Rodsout Creeks. 10 Boat pass three miles through Rodsout Creeks. 11 Boat pass three miles through Rodsout Creeks. 12 Boat pass three miles through Rodsout Creeks. 13 Boat pass three miles through Rodsout Creeks. 14 Boat pass three miles through Rodsout Creeks. 15 Boat pass three miles through Rodsout Creeks. 16 Boat pass three miles through Rodsout Creeks. 17 Boat pass three miles through Rodsout Creeks. 18 Boat pass three miles through Rodsout Creeks. 19 Boat pass three miles through Rodsout Creeks. 20 Boat pass three miles through Rodsout Creeks. 21 Boat pass three miles through Rodsout Creeks. 22 Boat pass three miles through Rodsout Creeks. 23 Boat pass three miles through Rodsout Creeks. 24 Boat pass three miles through Rodsout Creeks. 25 Boat pass three miles through Rodsout Creeks. 26 Boat pass three miles through Rodsout Creeks. 27 Boat pass three miles through Rodsout Creeks. 28 Boat pass three miles through Rodsout Creeks. 29 Boat pass three miles through Rodsout Creeks. 30 Boat pass three miles through Rodsout Creeks. 31 Boat pass three miles through Rodsout Creeks. 32 Boat pass three miles through Rodsout Creeks. 33 Boat pass three miles through Rodsout Creeks. 34 Boat pass three miles through Rodsout Creeks. 35 Boat pass three miles through Rodsout Creeks. 36 Boat pass three miles through Rodsout Creeks. 37 Boat pass three miles through Rodsout Creeks. 38 Boat pass three miles through Rodsout Creeks. 39 Boat pass three miles through Rodsout Creeks. 40 Boat pass three miles through Rodsout Creeks. 41 Boat pass three miles through Rodsout Creeks. 42 Boat pass three miles through Rodsout Creeks. 43 Boat pass three miles through Rodsout Creeks. 44 Boat pass three miles through Rodsout Creeks. 45 Boat pass three miles through Rodsout Creeks. 46 Boat pass three miles through Rodsout Creeks. 47 Boat pass three miles through Rodsout Creeks. 48 Boat pass three miles through Rodsout Creeks. 49 Boat pass three miles through Rodsout Creeks. 50 Boat pass three miles through Rodsout Creeks. 51 Boat pass three miles through Rodsout Creeks. 52 Boat pass three miles through Rodsout Creeks. 53 Boat pass three miles through Rodsout Creeks. 54 Boat pass three miles through Rodsout Creeks. 55 Boat pass three miles through Rodsout Creeks. 56 Boat pass three miles through Rodsout Creeks. 57 Boat pass three miles through Rodsout Creeks. 58 Boat pass three miles through Rodsout Creeks. 59 Boat pass three miles through Rodsout Creeks. 60 Boat pass three miles through Rodsout Creeks. 61 Boat pass three miles through Rodsout Creeks. 62 Boat pass three miles through Rodsout Creeks. 63 Boat pass three miles through Rodsout Creeks. 64 Boat pass three miles through Rodsout Creeks. 65 Boat pass three miles through Rodsout Creeks. 66 Boat pass three miles through Rodsout Creeks. 67 Boat pass three miles through Rodsout Creeks. 68 Boat pass three miles through Rodsout Creeks. 69 Boat pass three miles through Rodsout Creeks. 70 Boat pass three miles through Rodsout Creeks. 71 Boat pass three miles through Rodsout Creeks. 72 Boat pass three miles through Rodsout Creeks. 73 Boat pass three miles through Rodsout Creeks. 74 Boat pass three miles through Rodsout Creeks. 75 Boat pass three miles through Rodsout Creeks. 76 Boat pass three miles through Rodsout Creeks. 77 Boat pass three miles through Rodsout Creeks. 78 Boat pass three miles through Rodsout Creeks. 79 Boat pass three miles through Rodsout Creeks. 80 Boat pass three miles through Rodsout Creeks. 81 Boat pass three miles through Rodsout Creeks. 82 Boat pass three miles through Rodsout Creeks. 83 Boat pass three miles through Rodsout Creeks. 84 Boat pass three miles through Rodsout Creeks. 85 Boat pass three miles through Rodsout Creeks. 86 Boat pass three miles through Rodsout Creeks. 87 Boat pass three miles through Rodsout Creeks. 88 Boat pass three miles through Rodsout Creeks. 89 Boat pass three miles through Rodsout Creeks. 90 Boat pass three miles through Rodsout Creeks. 91 Boat pass three miles through Rodsout Creeks. 92 Boat pass three miles through Rodsout Creeks. 93 Boat pass three miles through Rodsout Creeks. 94 Boat pass three miles through Rodsout Creeks. 95 Boat pass three miles through Rodsout Creeks. 96 Boat pass three miles through Rodsout Creeks. 97 Boat pass three miles through Rodsout Creeks. 98 Boat pass three miles through Rodsout Creeks. 99 Boat pass three miles through Rodsout Creeks. 100 Boat pass three miles through Rodsout Creeks.

BOAT NAMES

To most Captains a name for their boat was a matter of pride and importance, though some boats were known only by the canal company's number.

In their choice of names the imagination of the boatmen knew no bounds. They drew you every imaginable subject and among their favorites were (flowers---(Rose, Sun Flower, Daisy), Trees - (The Oak, Pine Knot,) Birds - (The Eagle, The Lark, Linnet), The historical great - (Cleopatra, Noah, Columbus), Indians - (Pocahontas, Little Belt.) Some captains had no imagination at all (Model Scow, Premium Carrier, Marvin Merchant) and some just carried the owners name (E. Childs, Morgan Kerr), but every great American was remembered (George Washington, Henry Clay, Patrick Henry, General Jackson) and some showed their patriotism (The Patriot, Yankee Soldier, Victory), while the old soldiers liked to recall their campaigns (Vicksburg, Atietam).

The list which follows includes of course, only a very few of the many boat names and some of the captains:-

Serf	Peter Hixon (Colored)	Mary Jane	Lorenzo Horton
Champion	Jonas Munson	Sir Isaac Newton	Chauncey Coodrich
Pontiac	Isiah Davenport	The Bird	Zachariah Rosencrans
Brown Thrush	Alpheus Galloway	The Bonny Bell	Bob Evans
Flying Fish	Alpheus Galloway	Santa Claus	William S. Wood
The Cork	Charles Meddler	Nightingale	Edward Parliaman
The Ark	Darius Cadney	Matilda	Nicholas Serrine
Niagara	William H. Frantz	Sun of Wurtsboro	William St. Wood
Landscape	William A. French	Billy	Edward Piggott
The Banner	Joseph Munson	Nightingale	David Reynolds
George Washington	Ezekiel Cadney	Model Scow	Thomas Cornell
Look and See	Andries Van Wagonen	Hope	Peter P. Yaple
No License	Peter Van Wagonen	New World	Orlando Tutthill
Noah	Obenizer Schoonmaker	Guide	William Murray
Tribune	Jackson Lambert	Bell Flower	Formerly ("No License")
Mermaid	Cornelius De Witt	Mill Boy	George W. Tuthill
Female Sailor	Joseph Snyder		
Hard Times of Anyplace	Andrew Nesler		
Old Bull	David Aber		

PACKET BOATS

Daniel Webster - Fashion - Orange-Luther Bradish

The following piece of poetry was written by a boatman who longed for the good old days on the "D&H":-

We left Honesdale one day in May, Jim Law gauged our boat,
 Al Kimble had the left lock ready, for our boat to lower
 We got our hay, oats and groceries at the guard lock, Where Pat Wier had his store,
 Miles Bishop tended Chris Lane's lock, A man we were glad to meet,
 "Tom" Colo made shade frames at Whitaker's And they were hard to beat,
 Next was called the lonesome lock operated by Dan Corroll,
 Then to White Mills where Darflingers made Americas's greatest crystal glass to sell,
 On to McHales where "Mike" Hamlon went to school,
 If you got hot at Hennessey's Josh DeWitt knew where to get you cool,
 We were glad to spend the night at Hawley where three rivers run,
 When you reached Pike County there was only one,
 It was at Conklin's lock where "Loot" Howe's horse was taken from the stall,
 Mike Connors tended Rock Lock, he was over six feet tall,
 Billy O'Brien was at Corroll's lock and he was somewhat lame,
 No matter what went on at Daisdens, Dan Vincinus smiled just the same,
 Don't forget the Poolpit, you wouldn't if you could, that's where Marr Carlen sowed and
 sold his wood,
 Then Frank Daniels, he was always big and fat,
 Pat Harrison was the watchman but they called him "Shoot the Hat,"
 At the upper lock of Narrows, Jim Harrison was there, his cheeks were like two red apples
 to match his curly hair,
 His brother Mike at the lower lock, would make the gate chain ring,
 Every time a boat went up or down he went over to the spring,
 We went through Pike County's biggest farm, they employed a dozen men,
 The owner's proper name was Beck, but they called him "Field Pen,"
 Pat Cannon would say, "Come on loaded boat", the drivers would shout "Yay lock" just to get his goat,
 Abe Rowland had a family he thought very dear.

Mike Shields was at Hanners selling Cluckenberger's beer. The canal below Rodgers' was rather wide. A low drop gate at Corkonian's where you had to close the slide. We bought milk from Mrs. Avery a woman very kind. Dan Cocks made brooms at Griswold's, although the man was blind. There were two locks there, the upper and the lower. We were at Westfalls, a church, five houses and a store. Do you remember Saxons, the hairy man? He lived at Barron all alone. He took the warts off your hand by rubbing them with a stone.

George Rowland, well known in Pike and Wayne. Billie Bishop left his father's lock to be a conductor on a train.

Next O'Donnells, the house on the bank all alone. Joe Tague tended tinsmith's lock all alone, and quarried all the stone.

Now we are at Ridgeway's three locks. You can leave the tow-line slack when we go through the aqueduct, to cross the Lackawack.

We went another half mile, Tom Tierney, for some light boats had to wait. Here we cross the Delaware and go into New York State. The next three locks were on Charlie Gison's beat. Pat Douney baked bread for him and mixed it with his feet. There were two locks at Barryville, a pretty little town. When we got to "Handsome Eddy" Dan Lennehan locked us down.

Deckers then Lamberts, the next a man never known to smile. Perhaps you know him - - Squire Van Tyle?

We went through two miles, Hickory and Oak ridge. Pond Eddy was the only two mile level that didn't have a bridge. We went right through Carpenter's basin and slid down Widow Kelly's gate. Pa Gene Smith had the first red Berkshire pigs raised in New York State. At Woolsey's a man with few words to say. Two locks at Mongaun, then on our way. (Butler's lock stands seventy feet above the river bed. We looked out on the twelve mile level, scooted along the rocks with the Hawks Nest overhead.

(When we reached the Bolton Basin Mrs. Somnson was there when we arrived. (That's where they had the big break in 1885. (We have Sparrowbush and Yellow Stores, Port Jarvis round the old mill turn. (Them Pine Woods with plenty there to burn. Birds Nest Rocks, Green Basin, Sand Turn and Huguenot. (At the Mineral Springs we had a drink. Then went up the Hill five locks, they were called Neversink. The last lock wasn't very high and looked out on the summit. That's where we got the pic. Cudaback, Comfort's Basin, Van Engen's Brick Yard, Buttermilk Port Orange, Westbrookville. You had to swing hard on the tiller so as not to drag 'Round Tunnel Hill. We bought eggs and milk at McKewen's and at John Hamilton's I got off the boat to cook. While the team went on alone to Craven's abutment below Overbrook. Jim and Bobby Burns, Kernan's Halfway House and Shorty Brown. Graham's Hickory Grove then John Murphy in the turn.

We went through Wurtsborough as level as can be. Going in I saw Pat McElroy on my way out Pat MacNamee. Mike Rogan lived at the lead mines, so did Jime Malone. At Summitville were Jim Gooney, Elmer Comeback, McKew's and Anthony O'Boyles homes. P.O. Callahan, in his red underwear so tall. William E. Rose at the lock was a friend to all. Phillipsport covered a big range, from the end of the summit to the Tow-path change. Lock tenders were: Will Hallstead, W. Donnley, Henry Rogers, Enoch Rogers, Dan Hanion, Bill Robinson. Bill Foster, Jack McCarthy, Hank Woods, Joe McKenne.

All these men took some coal to warm their little coop, but Jack McCarthy took more than all the rest, because he had the biggest scoop.

John Upright, the same at all the other locks, could make a good lamp board or good feed box. Louie Beardsley, they call this county line.

Next Lock was where Mose Clark lived, who painted up our sign.

Mrs. Callahan made our flag, headdress or anything we wished.

G. L. Ostrander made our hammock and nets to catch the fish. Mr. Yoppy had all the buildings painted white. Jim Startup sold liniment and swore that it would kill a spavin in a night. Two miles more to where Sam Taylor tended lock and Joe Quigley tended store. Ellenville was a great manufacturing town and goods from far and near. Most everything was shipped by boat, even Culmers beer.

Shirleys Lock where the carpenter's shop stood by the road. They built boats at Cantonville tho' they never carried a big load. Chris Genniel came next and baseball he loved to play. Jack Comfort had a store at Robinson Decker's and was the first to make it pay.

Remember no hills below this lock.

Reformatory on the Barron, they called it Napanock.

Port Ben dry dock, the store run by A. C. Cline.

Bob Drivers built boats at Port Hickson, the best along the line. There were farming sections around Middleport and how the crops did grow. We had three miles of good canal till we reached the fiddlers elbow.

The store at Port Jackson sold groceries and dry goods. Jacko sold hats while I bought mine from Mart Woods. Scrub cedar grew plentiful around Foleys (Will Davis) and seldom seen was a large oak. Everything was spick and span at Alligerville where there was no engine to give off smoke. Some Captains said there was not four miles in the next level. But John Leonard the watchman said "yea". Here I put the bone in the pot and got ready for the Highfall "mess". There were five (6-7) locks at the collectors aqueduct and then a sharp felt turn. Upon the porch in a big arm chair we saw our old friend Bill Hearn. Next three were called Nigger Locks, for some reason I don't know why. They loaded cement on the tow-path but we scooted right on by. Coles Basin, then Hummrey's where Jonnie Herzog lost his wife. Two locks at Lawrenceville where Bill Delaney lost his life. Rosendale and Rocklock where America's great cement is made. Do you remember the spring at Websters over in the shade? Milhans near Laughlins dinner sign. Now Creek Locks where they have the shortest level on the line. Some thought the creek dangerous to go down, if the water was high. Ask Mrs. McGinnis (Margaret) She might know why. When strange teams saw the hill at guard lock, they became somewhat afraid. Now at Eddyville all coal boats were weighed. Through the last lock we did go, George Debois, captain of the Pittston, would be waiting to take us in his tow. To Roundout for our turn to wait when the cargo was discharged then would draw on freight. On the D & H Canal our friends were many but the dollars they were few. I'd be glad if we had the old times again, maybe its the same with you.

Boatmen employed on the D & H Canal - 1888

Aiken, John F.	Doolittle, Emmett	Jansen, Frederick	McCue, James	Shaffer, Charles
Agin, David	Donnelly, John	Jordan, Charles	McCue, Michael	Shafer, Philip
	Dougherty, Daniel	Jordan, Thomas	McGinnis, Peter	Schroeder, Chris
Bennett, Philip			McNamee, Thomas	Smith, C. W.
Brown, George A.	Eck, William	Kelley, Michael	McGoway, Edward	Shanley, Thomas
Brack, Nich.	Eck, Louis	Kelider, W. E.	McAndrew, Edward	Smith, Sidney
Burns, Jos.	Eck, Ferd.	Kearney, Peter	McClure, David	Startup, R. W.
Bell, John	Ecker, Peter J.	Kennedy, Patrick	McDermott, John	Sherry, Patrick
Bradford, W. H.	Ennis, James	Kelb, Fred	McGinnis, Lawrence	Sutton, John
Bracy, John	Evans, George	Kelb, Joseph Jr.	McAndrew, James	Stahl, George
Burger, David		Kane, James	McFadden, James	Shafer, Jacob
Burns, Patrick	Fahey, William	Kane, William J.	McAlinney, Patrick	Sahlhoff, Frederick
Broaders, Michael	Fitzgerald, James	Kailighan, Thomas	McCue, Patrick	Smith, Miram
Burger, C. B.	Framtz, Adelbert			Sherman, Jos.
Butler, Dennis	Feeley, William	Lowery, Michael	Neimeyer, A.	Schycart, George
Baird, Riley	Finn, Henry	Landers, William H.	Neimeyer, William	Schleede, William
Burns, M. J.	Feeny, Barney	Landers, Charles	Naughton, Patrick	Stoehr, Henry
Burger, Elmer	Freer, Oliver	Lynch, John		Solon, John Jr.
Bowen, John	Finan, John J.	Lowery, James J.	O'Neill, Felix	Spellman, Patrick
	Freer, Joseph	Luby, John	O'Rourke, Patrick	Startup, Charles
Carey, Patrick		Lerch, Andrew	Oulton, Martin	
Cavanaugh, Daniel	Carrity, John		O'Boyle, Anthony	Terwilliger, John A.
Colo, Patrick	Galloway, Gov.	Murphy, Martin	Osterhoudt, J. H.	Terwilliger, Jonathan A.
Coughlon, Patrick	Galloway, David	Murphy, Michael		Tierney, William
Coyne, Philip	Grimes, Peter	Murphy, John		Turner, Nelson
Carr, James, Sr.	Gabriel, George	Murphy, James	Purcell, Patrick	Turner, Nelson
Cummings, D.	Green, Increase	Martin, Patrick	Purcell, Hugh	Tucker, Bernard
Cummings, William	Gibbons, Patrick	Morrow, Charles	Pettibone, Jacob	Tucker, Thomas
Carney, Sylvester	Ganahan, Thomas	Murray, James J.	Pettibone, Joseph Jr.	Thornton, Joseph
Contant, R. P.		Martin, Lewis	Powers, John	Thornton, John
Comfort, Richard	Harvey, John	Manning, William	Prophet, Robert	Thornton, James
Constant, Leonard	Hayes, Edward	Miller, Philip		Thornton, George
Clark, James T.	Hamilton, James	Malone, Daniel	Quinn, Thomas	
	Hoffman, Peter	Milroney, Martin		Uddenbrow, D.
Dougherty, Hugh	Hopay, William	Miller, Michael	Rutledge, Hugh	
Donnelly, John	Hayes, R. H.	Mullen, John H.	Rose, John N.	Vicines, Fred
Dunn, Thomas	Hanrahan, Patrick	Moran, John	Rose, Joseph	
Deyo, Levi	Hardy, Daniel	Muller, John	Roose, W. H.	Welch, Chris
Donahue, Michael	Hoffman, Ed.	Mullen, John D.	Rafferty, Daniel	Woolsey, Richard
Dougherty, Robert	Hines, Patrick	Moran, Dennis	Rogan, M. J.	Wood, A. L.
Doughney, Vere.	Havey, Patrick	Markle, Arch	Reilly, Bernard	Wood, Charles
Dow, Thomas	Hotchkiss, E. G.	Madden, John	Reilly, Owen	Weber, George K.
Donnelly, James	Hensberger, Frank	McCarty, Thomas	Reilly, James	Wissert, Fred
Delaney, William	Horan, John J.	McLaughlin, James, Jr.	Reilly, William	

In Assembly,

February 23, 1829.

[Brought in by Mr. BRADISH]

AN ACT

To loan the credit of the State to the President, Managers and Company of the Delaware and Hudson Canal Company.

The People of the State of New-York, represented in Senate and Assembly, do enact as follows :

1 Section 1. The comptroller is hereby directed to issue, to the president,
2 managers and company of the Delaware and Hudson canal company, in
3 such sums as the said company may require, special certificates of stock to
4 the amount of five hundred thousand dollars, redeemable at any time after
5 the year 1849, at the pleasure of the state, and bearing an interest at the
6 rate of four and an half per cent per annum, payable quarterly at the office
7 of the said company in the city of New-York; for the redemption of which
8 stock, and the due payment of the interest thereon, to the owners of such stock,
9 the faith and credit of the people of this state are hereby pledged.

1 § 2. The said stock shall be so issued by the comptroller, on the delivery
2 of the security herein after provided to be given to the people of this state,
3 by the said company, for the said loan of five hundred thousand dollars.

1 § 3. The said stock shall be made payable to the said corporation, or their
2 order, and may be transferred by the said corporation at their pleasure; but
3 the said stock shall in all cases be transferable only in person, and by order
4 of the president, managers and company of the said company in the city of New-York, in accordance
5 with the provisions hereof.

1 § 4. Whenever any holder of any certificates of such stock shall desire
2 to transfer, divide or consolidate the same, he shall be authorised to do so,
3 in the manner provided for by the fifth section of the act, entitled "an act to
4 loan the credit of the people of the state of New-York, to the president,
5 managers and company of the Delaware and Hudson Canal company, and
6 for other purposes," passed March 10, 1827.

1 § 5. For the purpose of completely securing the people of this state for
2 the responsibility incurred by the pledge of their credit, as aforesaid, the
3 comptroller, with the advice of the attorney-general, before he issues the
4 said stock, or any part thereof, shall receive from the said company, the like
5 security as is provided in the sixth section of the last mentioned act,
6 which is as follows:

Handwritten text: The said company shall give to the comptroller, as security for the said loan, a mortgage on the Delaware and Hudson Canal Company, in the city of New-York, in accordance with the provisions hereof.

Handwritten text: Act with the said company in the city of New-York, in accordance with the provisions hereof.

Albany, February 25, 1829.

Sir—

The Hon. W. L. Marcy, late comptroller, in his report in relation to the Delaware and Hudson Canal Company, having adverted to the Schuylkill and Lehigh coals, as the only anthracites that might compete, in our market, with the Lackawanna; and inquiries having been made of me, as to the probable consumption of this description of fuel, I deem it to be my duty to lay before you, some facts on both these points; to which I beg leave to solicit your attentive consideration: and believing, as I do, that your conclusions will have an important bearing on the general interests and domestic comforts of a large portion of your fellow-citizens, and especially on our numerous and increasing manufactories, I trust I shall have your kind indulgence for this communication.

I am with great respect,
Your obedient servant,

President of the Delaware and Hudson Canal Company.

Extract of a letter from Messrs. I. & J. Townsend, to the Hon. W. L. Marcy, late comptroller, dated Albany, January 21st, 1829.

"Your favor of the 20th January was duly received, asking our opinion as to the quality of Lackawanna coal. We have tried it in our furnace, and at the Troy iron and nail factory, and the foremen of both establishments prefer it for heating and melting iron, to the Lehigh or any other anthracite coal, which they have used. It ignites in much less time, and the same weight produces a better result.

"Twenty or more families in this city are using this coal, who all give it a most decided preference to either Lehigh or Schuylkill for the grate.

"From our experience in the use of this coal in the different manufactures of iron and nails, in which we are engaged, we give it as our most decided opinion, that the Lackawanna coal will be preferred to any other anthracite, for all manufacturing purposes."

Extract of a letter from Capt. Elum Lynds, superintendent of the state prison, Sing-Sing, to S. M. Hopkins, Esq. one of the commissioners, dated 26th January, 1829.

"I received about a month since, five chaldrons of Lackawanna coal. It was put on the forge of one of our best blacksmiths, and he pronounced it the best coal we ever had. The smith's forge tests the purity of coal, perhaps, better than any other mode of burning it. We have also burned it under our steam boiler, and in the stoves.

"It burns freer, and is much more pure than either Schuylkill or Lehigh, and I have no doubt it will be found a better coal for all uses, than either of the other kinds."

Extract of a letter from Lemuel Pomeroy, Esq. (manufacturing arms for the U. States,) to Messrs. I. & J. Townsend, dated Pittsfield, February 10th, 1829.

"The subject of Lackawanna coal is very important. The advantage which it possesses over the Lehigh, is very manifest in the furnace, where its heat is applied to the welding of musket barrels. I found that we could weld nearly double the number of barrels with the Lackawanna, that were welded with the Lehigh, and a too of the former will produce much more heat."

In conversation with Messrs. Townsends, Mr. Pomeroy stated that with the Lehigh, his men welded from 6 to 8 gun barrels a day, with the Lackawanna 14.

Extract of a letter from an iron manufacturer in New-York, dated 20th February.

I have used five chaldrons of Lackawanna coal, and have no hesitation in pronouncing it the best kind of anthracite. It melts iron faster in a Cupola Furnace, than either Schuylkill or Lehigh. I have used it on the blacksmith's forge, and in the grate; it ignites quick and gives a very strong heat; it is free from slate and stone, which is not the case with either of the other coals.

Mr. Baldwin of Kingslee reports that he uses anthracite coals exclusively in his furnace. That he has used Schuylkill, Lehigh and Lackawanna, and after repeated experiments of each kind by measure, he found that with Lackawanna, he melted his charge of about 700lb. of iron in half an hour less, and made better metal.