

THE COAL SHIPS

BY THOMAS WILSON



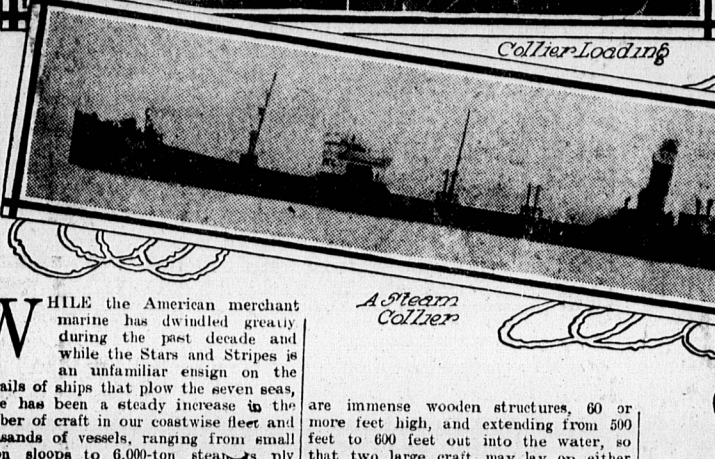
Collier Loading



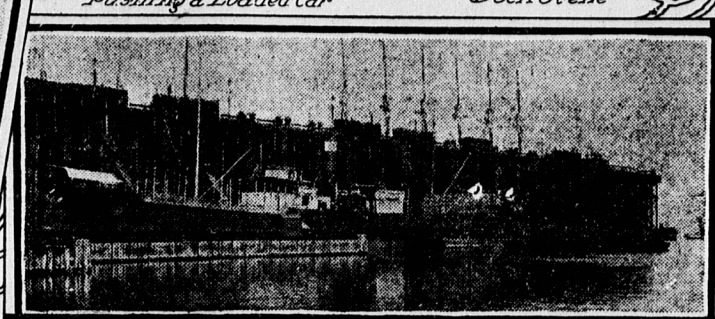
The "Barney" Car Pushing a Loaded Car



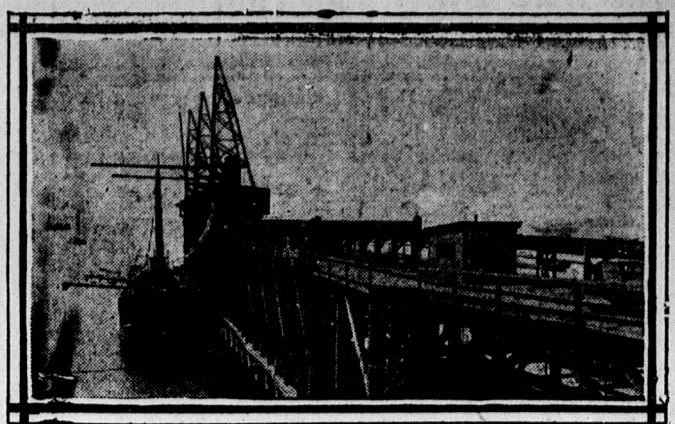
Deck Scene



A Steam Collier



Loading Pier



Discharging Pier

WHILE the American merchant marine has dwindled greatly during the past decade and while the Stars and Stripes is an unfamiliar ensign on the trails of ships that plow the seven seas, there has been a steady increase in the number of craft on our coastwise fleet and thousands of vessels, ranging from small 10-ton sloops to 6,000-ton steamers ply along the shores of the Atlantic and Pacific Oceans, to say nothing of the Gulf of Mexico.

Of all maritime business, there is none that equals in extent or in the number of vessels employed that of the transportation of soft, or bituminous coal.

Engaged in this phase of coastwise commerce are about 400 vessels, the majority of which are schooners and barges, and they go to and fro like shuttles in a locomotive weaving the cloth of commerce and industry. Now and then, as though it were the breaking of a thread, a barge or a schooner is lost, but for every one that is claimed by the sea there is another sent from the stocks, and thus the number never decreases; indeed, the vessels are being built faster than they are lost and the number in service is constantly increasing.

So important is the bituminous industry that there is not a day in the year when there is any cessation and it is only when furious gales along the coast make it dangerous do the vessels fail to go.

For one who has never seen the operation of placing several thousand tons of coal on a vessel to one of the loading piers is well worth while. These piers

are immense wooden structures, 60 or more feet high, and extending from 600 feet to 600 feet out into the water, so that two large craft may lay on either side at the same time.

From the top of the pier and along the sides every 20 feet extend the chutes, not unlike the chutes with which household coal is dumped from the coal cart to the cellar, only they are much wider and heavier, requiring considerable effort to operate them. Since they are arranged with a series of counterweights they can be handled with comparative ease. The object in having so many chutes is that no matter how long a vessel may be there will always be one chute that will lead direct into its hatchway.

While the moving of a steamer a few feet forward or backward is a small matter, as she can be moved by her own power, the shifting of a large sailing vessel requires a tug. This would mean expense, but more important than that, loss of time. Time plays a most important part in the transportation of coal, for practically all of the vessels in the business are under charter and every minute must therefore be taken into consideration.

From the yards on the shore end of the pier the loaded coal cars are pushed out on the top platform of the pier and are stopped directly over a trap door, beneath which is the chute that leads to the vessel's hatchway. Then the bottom of the car is dropped out and the coal rushes down. In order to prevent the coal falling too swiftly and to prevent the large lumps from either breaking up or injuring the vessel there are here and there checks.

As the cars are emptied they are shunted to the outer end of the pier, where they are sent on a turntable which swings them over on another track, and they return by gravity through the center of the pier to the yard whence they came. The operating of the cars is done largely by mechanical power or gravity.

When one of the piers of the Western Maryland Railroad was built it was found that the shore approach would be too steep to permit engines pushing the cars to the top of the pier, as is done at the other piers, so a rather ingenious plan was resorted to. Under the approach there was set up a steam engine which operates a cable that leads from the top of the platform to the ground and on the lower end of the cable is a "barney" car. The loaded coal car is pushed by an

engine down to the approach, and from a pit between the rails the barney rises behind it and pushes it to the top of the platform. Then the barney, by its weight drags the cable back.

When the coal begins rushing down the chutes into the holds of the vessel squads of men known as "trimmers" enter the holds armed with shovels and as fast as the coal runs in and piles up at the hatchway they shovel it into the bilges and other parts of the hold. Then, when the last carload has been dumped the men trim the cargo off level on top and from one end to the other so that the vessel is evenly loaded.

The trimming of a vessel is an exceedingly important work, for sailing craft especially, as if the vessel is not loaded on her sailing lines she will make poor headway, to say nothing of her being difficult to manage in a high sea.

In loading vessels that are going coastwise it makes little difference whether the coal is dry or wet, but when a vessel is to carry coal foreign or around the Horn to San Francisco, then the loading becomes a very serious matter, for every

ounce of coal that goes into her must be absolutely dry, otherwise on such long voyages there is danger of spontaneous combustion.

Spontaneous combustion is one of the peculiar features of bituminous coal, and even when stored in piles on shore it is liable to self-ignition. So great is this danger that even railroads that use immense quantities do not care to keep any great quantity on hand, while the miners prefer to get it off their hands as soon as it is taken out. Sealed in a vessel's hold for a dozen weeks or more the danger of the coal igniting is all the greater, and not a few coal-laden vessels have been destroyed by fire, due, primarily, to the coal having been wet or damp when loaded.

The unloading of a collier is just as interesting as the loading. In the taking out of a cargo of grain the process is just the reverse of putting it in. The endless chain buckets and the tubes that shoot it in suck it out. With the discharging of coal there is a marked difference, for there has not yet been devised any suction pump that will answer the requirements, and the endless chain bucket arrangement is unsatisfactory.

There are practically but two methods that have been found to be satisfactory. One is the rather crude bucket and the other the modern dredge. In the former operation iron buckets, each holding about half a ton, are lowered into the hold from the end of a crane and filled by shovels.

With the dredge a machine not unlike

that used in deepening channels is used, only the dipper part is operated from a crane on a high trestle or pier. The dipper drops into the hatchway and grabs a couple of tons of coal at a time. As it lifts the crane swings and the coal is deposited into hopper cars that take it either to the storage yards or else to its final destination. Although the dredge does away with more iron than the buckets, there is nevertheless employment for large gangs of shovelers, who pile the coal beneath the hatches of the dipper may get it.

The colliers are also of interest. Among the sailing vessels most of the craft are schooners ranging from the modest little two-master to the giant with six masts. The seven-masted schooner Thomas W. Lawson, which was lost on one of the Seiffy Islands, was built for the coastwise coal trade, but she proved to be a bit too large.

The barges that are towed from port to port by powerful tugs are largely relics of the days of square-riggers. Most of the barges were originally sailing vessels that had met with misfortune and not considered worth the expense of fitting out again so as to withstand the strains of sailing. These vessels are easily converted into barges. The sawing off of the bowsprit, the cutting down of the masts and the building of a deck-house on the poop, and the "floating coffin," as sailors call a barge,

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HOW TO TRAIN THE SINGING VOICE

A resonant speaking voice is essential to good speaking. If one does not articulate early in speaking, the same defect will be noticeable in singing, as the same muscles are used in both instances. The Italian language, with its open vowel sounds, is the easiest to sing in. Consequently it is easier for an Italian child to sing without training than an English one, as the former has been used to speak with an open throat from infancy.

As an open throat is essential to good singing, it follows that one speaking continually a guttural or throaty language has some difficulty in producing the full open sounds necessary in singing. It is first essential to a student of singing in correct breathing, which is the basis of

the art. The diaphragm must be used correctly in breathing, and when this has been thoroughly mastered the voice is not only fully supported for the present, but for the years to come.

Not a single artist can be pointed out whose voice has stood the strain of many years' hard work but has correctly used the diaphragm in breathing. The cause of many singers' voices going after being a few years before the public is incorrect breathing.

Let the student lie flat on his back, with his head directly on the floor, and arms outstretched behind his head. Take a deep breath, extending the diaphragm to its fullest extent. Next exhale slowly, pressing from the bottom of the lungs, drawing the diaphragm inward to combine with and upward until the air is forced from the lungs.

It is a good exercise for the student to practice 20 times every morning before dressing, with the window open, in order to insure pure, not vitiated air entering the lungs. A common fault with students and one likely to cause endless trouble is that they press out the bottom of the lungs against the diaphragm when exhaling, consequently they are trying to press the air upward over the vocal chords and downward at the same time, which naturally causes the voice to sound pinched.

The lungs must be treated as a tube of paint. Press the tube at the end, follow on and the entire contents will be exhausted; but squeeze the tube in the middle and only a part is used, a portion remaining in the bottom of the tube.

Deadly Consumption Starts from Cotarrh

Thousands Think Catarrh is Cold, Neglect It and Die

Last year forty per cent of all deaths were from consumption. These people all had catarrh in the first place, but neglected it.

Can't you realize the awful, horrible mistake of not curing catarrh now?

To thoroughly root out all taints of Catarrh nothing can act so beneficially as "Catarrhzone," which is acknowledged by all doctors to be a specific for all forms of Catarrh, Asthma, Bronchitis, throat, nose and chest ailments.

The reasons why Catarrhzone cures when other treatments fail are very simple. In the first place Catarrhzone reaches the true source of the disease. Very few, if any, of the ordinary cures can do this. Catarrhzone is carried along with the air you breathe through the mouth, throat and bronchial tubes. Its antiseptic vapor at once kills any germs that may be lurking in these air passages. No matter how remote these germs may be they can't possibly escape Catarrhzone; it goes everywhere the air you breathe goes, and into air cell or air passage can't its healing influence.

The strong point about Catarrhzone is its ability to go direct to the spot where the catarrh germ is working. Every breath through the inhaler means instant death to the microbes, and gives the sufferer relief from the gnawing, destructive action of these parasites. It must be remembered, also, that Catarrhzone is a marvelous healer. It soothes the inflamed membranes, patches up the little sore spots, and removes the sensitive, tender feeling from the nose and throat. Of course, the discharge of mucus stops at once, Catarrhzone prevents this entirely.

Another nasty symptom that quickly disappears is the dropping of vile discharge from the throat into the stomach. Catarrhzone clears out the nostrils so that you don't have to breathe through the mouth. Hawking and spitting stop because the discharge is cleared up. The blinding headache that is caused by nothing else than catarrh is also lifted from your burden, and life begins to look happy once more.

Complete treatment, including beautifully polished hard rubber inhaler and extra supply of liquid, costs \$1.00, and is guaranteed to cure or your money back. Smaller sizes 25c. and 50c., at all druggists, or by mail from The Catarrhzone Company, Kingston, Ont.

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Late arrivals include combs, (fine nocket and dressing), tooth brushes, Hansen's Jelly Colors (15c), sheet gelatin, sponges, (an elegant variety), Thermos Bottles (different sizes), etc. A. W. Reddin. 4-7drft.

BIG FREE TRIP FOR THE YOUNG LADIES

(Continued From Second Section)

Some people send ballots addressed "The Guardian, Charlottetown," instead of "Tour Editor, The Guardian, Charlottetown." In consequence these go to the wrong department and are delayed being placed to the credit of the candidate for whom they are intended. In consequence when the total vote appears these ballots may have to remain over for another count.

Candidates and their followers are asked to abide by the following instructions:

- 1-Ballots must not be folded but trimmed neatly and wrapped snug in flat packages or envelopes. The name of the candidate should be written outside the package.
- 2-All ballots must be filled out. Blank ballots must be rejected.
- 3-Ballots sent in after they are void will not be accepted, and candidates are warned against sending them in.
- 4-The Tour Department will not be responsible for votes lost in transit, nor will it pay charges on packages of votes sent by messenger.

The number of nominations from each district and the interest taken in the contest along with the variation in the territory covered in each district distributes the entire prize list including trips and consolations in the following manner to the eligible ladies obtaining the greatest number of votes.

For the district of Prince County, here will be the following prizes:-

- 1st—a big trip to New York City and return.
- 2nd—a full course scholarship in the Charlottetown Business College.
- 3rd—the choice of one of several mail scholarships from the International Correspondence Schools.
- 4th—same as for 3rd.

For the district of Kensington, Summerside and Alberton there will be the following prizes:-

- 1st—a big trip to New York City and return.
- 2nd—a full course scholarship in the Union Commercial College.
- 3rd—the choice of one of several mail scholarships from the International Correspondence Schools.
- 4th—same as for 3rd.

For the district of Montague, Georgetown and Souris East there will be the following prizes:-

- 1st—a big trip to New York City and return.
- 2nd—a full course scholarship in the Union Commercial College.
- 3rd—the choice of one of several mail scholarships from the International Correspondence Schools.
- 4th—same as for 3rd.

For the district of Charlottetown and Royalty there will be the following prizes:-

- 1st—a big trip to New York City and return.
- 2nd—same as for 1st.
- 3rd—a full course scholarship in the

Union Commercial College.

For the district of Queen's County there will be the following prizes:-

- 1st—a big trip to New York City and return.
- 2nd—same as for 1st.
- 3rd—a full course scholarship in the Charlottetown Business College.
- 4th—the choice of one of several mail scholarships from the International Correspondence Schools.
- 5th—same as for 4th.
- 6th—a beautiful new Cooking Range with warming closet, thermometer &c.
- 7th—a brand new Ladies Bicycle.
- 8th—Fifteen dollars in gold.
- 9th—Ten dollars in gold.
- 10th—Five dollars in gold.

All new and renewal subscriptions received through candidates are in every case credited to the candidate who sends them, and cannot be transferred to another.

All monies paid for new and renewal subscriptions to The Guardian on and after February 1st and until the contest closes entitle the candidate for whom they are intended to thousands of votes for each subscription of \$1.00 or more as per below revised schedule:-

Each \$1.00 for subscription 4000 votes	" 1.25 "	" 5000 "	
" 1.50 "	" 6000 "	" 1.75 "	" 7000 "
" 2.00 "	" 8000 "	" 2.25 "	" 9000 "
" 2.50 "	" 10,000 "	" 2.75 "	" 11,000 "
" 3.00 "	" 12,000 "		

and so on up to any amount, each \$1.00 new or renewal subscription to any person and to any address winning 4000 votes and each additional 25 cents for the same new or renewal subscription winning 1000 extra votes

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If instructed by the trustees of the late Frank McKenna to sell that property situated on Queen Street including number 62, 64, and 66.

Numbers 62 and 64 consist of a dwelling heated by hot water and fitted with all the modern improvements, also a shop all in same building.

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Each of the properties has a right of way in the rear.

The above properties will be sold by Public Auction on the premises on Thursday the 15th of April. For further particulars apply to a party named above.

BENJAMIN CARTER & CO. Auctioneer.

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We offer for sale our business stand of Murray River consisting of one and one quarter acres of land with buildings thereon including store 60 feet x 26 feet two stories, two warehouses, iron house and stable also wharf property. This property is well known as the best merchant business stand at Murray River being centrally located within easy reach of railway station and post office. Having a valuable water frontage it affords unsurpassed shipping facilities. For further particulars apply to the owners.

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