CARPENTER AT PANAMA

Bird's-Eye Views of the Canal and the Isthmus

By FRANK G. CARPENTER.

Other—The Work in the Canal as Compared With Champ Clark—Facts About the Great Ditch in a Nutshell—A Jamaica Official Who Fears for the Gulf Stream—Snapshots on the Zone—Riding Under Gatun Lake and Over the Culebra Cut.

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Tivoli Hotel, Ancon, Canal Zone, Panama.—I have come to Panama to write some plain, simple letters about the canal. I want to show you how things look to the man on the street, or how they would look to you if you came down to the isthmus. I am not an engineer, and I shall turn the figures into concrete examples. The amounts are so vast that they cannot be realized in figures. And, besides, figures mean nothing but dizziness to any one but the confessed mathematician and scientist.

You remember the story of the scientist who sneered at the poet who wrote:

Every moment dies a man,
Every moment one is born.

The scientist said: "Why, that man is absolutely wrong. Every one who has looked into the latest statistics of the human race knows that it is in every one and one-third minutes that a man is born, and that it is in the same time that one dies." I am not sure as to the fractions in this statement.

Well, in treating of the canal I shall deal only in round numbers. A cubic yard of earth is roughly a ton, and a yard of earth and rock is a big two-horse wagon load. I shall reduce the amounts of rock and dirt we have taken out to ditches, a yard wide and a yard deep, and the linear length of the ditches to miles, using 5,000 feet to the mile, for easy figuring. The actual mile is 5,280 feet, but the figures of the canal are so vast that a little thing like that does not matter.

What the Excavation Means.

For example, 100,000 cubic yards of excavation would equal a ditch a yard wide, a yard deep, and 100,000 yards, or 300,000 feet, long. Now, dividing by 5,000 feet to the mile, our ditch would be sixty miles long, or better, a ditch three feet wide and three feet deep to any locality just sixty miles from your home. A million cubic yards would be ten times the length of 100,000. It would equal such a ditch 600 miles long, and 10,000,000 would equal one 6,000 miles long, or twice as long as from New York to San Francisco.

But this canal deals not in millions and tens of millions only. Its figures run into the hundreds of millions. The total amount of our excavation, when completed, will have been 125,000,000 cubic yards, or say, 200,000,000 for easy figuring. That would equal a ditch a yard wide and a yard deep and 120,000 miles long. It would equal a ditch so big that the fattest hog ever killed at Chicago could walk through it with its back level with the top, and the ditch would be long enough to reach four times around the earth at the equator and still leave 20,000 miles to spare. It would require enough excavation to make fifteen tunnels through the center of the earth from one side to the other, and each tunnel would be big enough for that fat hog to crawl through. More, it would equal a great column three feet square reaching from here on the earth just half way to the moon. If the tunnel through the earth was increased to ten or twelve feet square it would not hold the total excavation and that tunnel would be large enough to drive through the biggest wagon load of hay ever hauled by four horses.

The above estimates will give you some idea of the work Uncle Sam has done and is doing in lifting earth here at Panama.

At the Top of the Canal.

The canal, as every one now knows, is to be a lock canal. The ships will be dragged up and let down by the Chagres river, which is being harnessed by the Gatun dam so that its level will be eighty-five feet above that of the Caribbean and the Pacific Ocean at either end of the waterway. How high is eighty-five feet? It is about the height of a seven-story flat, or less than one-sixth the height of the Washington Monument. Let us make the reduction even more concrete. Take some man that everyone knows. You have all seen Champ Clark, the stately Speaker of the House of Representatives. The Speaker is six feet tall. If fourteen men of the height of Champ Clark stood one on the head of the other and the last should play the part of Atlas by raising his hands he could just support the world on the level of this mighty ditch in a canoe moving with the depth of the Panama Canal.

The Canal in a Nutshell.

But all this is only preliminary. I shall describe the canal in detail as I go over it. In a nutshell it is fifty miles long from deep water in the Pacific to deep water in the Atlantic. From shore line to shore line the length is forty miles. In going through it the vessels enter Limon Bay, a magnificent harbor, and steam thence through the first Atlantic stretch, which is over seven miles long, to Gatun. The ship is still on the level of the Caribbean when it gets to Gatun, but there it meets the great locks, which, filled by the Chagres, lift it eighty-five feet into Gatun Lake. I will tell you later how it goes through these locks and what the locks are like.

In the lake itself the steamer may pass at full speed to the entrance to the Culebra cut, and the same level is maintained until you reach the other end of that cut at Pedro Miguel. There the vessel enters a lock and drops about the height of a three-story house into a small lake which is about fifty-five feet above sea level. That lake is yet to be made, but it will be a mile and a half long and fifty-five feet above the sea. At the end of the lake there are two more locks, one above the other, which successively drop it down from the height of a five-story flat to the channel and on the level of the Pacific ocean. Our ship is now only eight and a half miles from the ocean itself and is ready to steam off to China, Japan, Australia, or anywhere else in the Pacific.

Ignorance About the Big Ditch.

That is the story of the canal in a nutshell, but it is one which many do not understand. During the coming campaign we shall have stump speeches where the orators will speak of bringing the waters of the Atlantic and Pacific oceans together. They do not come together here at Panama, and if they did they would have to flow uphill to a height of eighty-five feet. The salt waters have but little to do with moving the ships from ocean to ocean. It is the fresh water of the Chagres river that does that work.

Nevertheless, some supposedly well informed men cannot appreciate this. One of the chief officials of the Island of Jamaica visited the canal the other day. He was made much of and was taken over it from one side to the other. At the close he said to Col. Goethals:

"It is a wonderful undertaking, but it seems to some of our people in England a dangerous one, for they fear that it may affect the current of the Gulf stream and deflect it."

I am assured that this story is true, although at first I could hardly believe it. The man referred to is the commander of the British forces in the West Indies, stationed at Jamaica.

A story somewhat similar was floating upon this imaginative Caribbean air when I was here in 1898, now fourteen years ago. The latter related to a Yankee sea captain and a blustering son of John Bull. The Britisher was boasting of the power of his government, and saying how it would wipe out the United States in case of a war between the two countries. Thereupon the Yankee tar replied:

"Indeed, man, it makes me laugh to hear you Britishers blow. Why, if Uncle Sam wanted to clean out your tight little island all he need do is to dig a ditch through the Isthmus of Panama and turn the Gulf stream into the Pacific. The next winter after that England would be as cold as Labrador and you Britishers would turn into Eskimos."

Many of the tourists, and even some of the writers about the canal who come here, show an ignorance which is colossal. The other day a lady correspondent from the Middle West was sent down to spend a week and write a dozen newspaper letters. She interviewed every one, including the secretary of the commission, who, during the talk, happened to mention De Lesseps.

"De Lesseps?" said the girl. "Who was De Lesseps anyhow? Every one is talking about De Lesseps. Oh, I remember now! He was the man who discovered the Isthmus of Panama."

A Railroad View of The Canal.

But let us return to the canal proper. The great ditch, as it looks today, is far different from anything one can imagine. Many of you have pictures of it in your minds. You see a ragged excavation of dry rock and earth, cut here and there by waterways and running across the Isthmus from one side to the other, with some elevation at the hills. You may imagine the sides walled with stone, and may even imagine you can see the great machinery as it is working in the Culebra cut. You probably have conceived big locks of concrete here and there and imagine something of the great dam at Gatun. All this is hazy, but you think you know how the canal looks as it is now. You are mistaken. The eyes of your brain are, metaphorically speaking, a thousand miles out of the way. If you could look at the zone as do the wild ducks which fly over it you would be greatly disappointed. The most of the canal does not show the work done upon it, and you cannot realize that more than enough earth to make a wall nine feet high and three feet wide clear around the world has been moved. You are told that upward of a quarter of a billion of money has been spent and you look in vain for the marks of the dollars. You will understand all better later on when I take you through the canal.

Let me tell you in simple words how the undertaking struck me as I came in today. As we approached Colon I saw no sign of a canal. There was a breakwater away off to the right, but no evidence of any interior waterway. In fact, all my ideas were turned upside down. I thought I was looking toward the west, and our steamer was really facing the Pacific ocean, which lay beyond a range of low mountains only fifty miles off. But lo! the sun rose there right in our faces and out of the Pacific, and it seemed to me it perceptibly winked as it squinted at me over this the lowest range of the Andes.

I had to stop and think a moment before I knew why this was. The isthmus here runs east and west instead of north and south, and the canal itself runs north and south instead of east and west. I have a room facing the east at Uncle Sam's big hotel here at Panama and I see the sun actually rise out of the Pacific ocean every morning. This part of the isthmus is the only place I know of where, standing on our hemisphere, you can note this geographical fact.

The Canal at Colon.

The entrance to the canal at Colon is now invisible from the steamers. I looked in vain for dredges and excavating material. There were no piles of dirt and rock. Everything is of the greenest of green. The shore is fringed with cocoanut trees, and the green grass grows all round.

The steamers land you at Colon, a ragged shabby town of low two-story frame houses with galleries running along the first stories and shading the streets. The town is bordered at one side with cocoanut trees, and standing on the steamer at the right you see a great cocoanut grove in which lies Christobal, Colon's big American sister. This has some of the canal administration buildings and the homes of many employes. They are all veiled in wire netting and there are no ditch banks or dirt to be seen.

Riding Through a Botanical Garden.

Crossing the isthmus on the railroad, along the line of the canal, is for the most part like riding through a botanical garden. You first pass Monkey Hill cemetery, that horror of the Panama of the past, but now a beautiful park, and then come into a country where nature runs riot in the luxuriance of its tropical vegetation. There are palm trees of an hundred varieties, wild bananas and strange trees in which are to be seen air plants and orchids hanging to the limbs and nestling at the roots of the branches. There are great clumps of bamboo with leaves as feathery as those which line the under wing of an angel, and great beds of tasseled papyrus, the same plant as that used in old Egypt to make the boat-like cradle in which little Moses rocked when he was discovered by Pharaoh's daughter. Even beyond the Gatun dam the country is still green. You are told you are on the line of the canal, and the very dirt over which you are passing will form its bed. In other places the woods are a jungle, and the hunter will point out the marks of a wild hog, a deer, or a tapir. This country is full of wild game. One of my fellow-travelers of today, an American judge of the Canal Zone, tells me his chief sport is hunting. He shoots many deer, and he recently killed a tapir which weighed 1,100 pounds. He says the tapir meat tastes like Chicago beef, and that the venison of Panama is as good as that of the Adirondacks or the Rockies.

Riding Under the Canal Level.

I shall not say anything here about the locks nor the mighty Gatun dam which holds back the Chagres. The railroad took us to the top of the level and then dropped us into the dam and carried us over its basin. Already twelve feet of water have been let in and by the time this letter is published the lake will be very much higher. The railroad now skirts the edge of the filled portion at the twelve-foot level and eventually there will be fifty or sixty feet of water above that of the present track. Six months from now the only way to traverse that track would be in a tube tunnel like that of the Pennsylvania railroad under the river on the way to New York.

We wound our way for some miles through the basin, passing little villages of rude shacks where negroes and mulattoes are still living notwithstanding they have been warned by the government to move. They can see the water come in, but they will hang on until it comes to their doorways, which time will be soon.

Leaving the Gatun basin, you come to a region where a great part of the land is made up of the spoil that has been taken out of the Culebra cut. Nevertheless you cannot realize it, for the kind mother of the tropics has already spread a coat of vegetation over the rocks and hidden the scars. It is only when you enter the Culebra cut and cross it that you realize what has been done. You see thousands of men working as the railway carries you flying by, and an endless river of earth is moving out on the cars to be spread over the hollows. In one place I was shown a dump which contained fifteen million cubic yards of such spoil. Using our method of calculation above given, that spoil would equal a ditch a yard wide and a yard deep nine thousand miles long. It would fill a tunnel running through the globe and still leave enough to make a ditch of the above size from New York to Chicago.

The railroad from the Culebra cut to Panama now crosses the cut in one place. Further along it runs on the canal bed, where a year from now there will be over forty feet of water, and shortly thereafter leaves the canal, and comes into Panama at the edge of Ancon. This is the old railroad. The new line has been located and the grading for it is going rapidly on.

FRANK G. CARPENTER.

ADVERTISING TALKS.

Written By
WILLIAM C. FREEMAN.

GEO. B. ATLEE & CO., Philadelphia Bankers, have been doing some very STRAIGHTFORWARD, SANE, EDUCATIONAL NEWSPAPER ADVERTISING. They do not use big space, but there is meat in what they say in the space—PEOPLE BELIEVE IT.

An advertisement of theirs which came to my hands recently gave an illustration how a purchaser could buy reliable investments and obtain a monthly income. It specified the investments that the firm recommended, gave the total cost at present market prices, told what it yielded in the way of dividends and then stated just exactly what income would accrue yearly therefrom.

IT IS THIS SORT OF FINANCIAL ADVERTISING THAT WILL PAY IN THE COLUMNS OF RELIABLE NEWSPAPERS.

Financial houses generally have confined their advertising announcements to a BRIEF STATEMENT of the investments they have to offer, followed by their name and address but they have not gone into any details.

This is a mistake, for people nowadays want to know ALL DETAILS without the necessity of calling or writing, and an advertisement to be effective MUST GIVE ALL INFORMATION AT THE COMMAND OF THE ADVERTISER.

I am told that the advertising of the Atlee Company is meeting with splendid response—that THE FIRM IS BUILDING UP a fine clientele among a class of people whose savings have not been heretofore invested in the manner they suggest.

The average person knows very little about securities and investments, and the financial house that will come out with an EDUCATIONAL ADVERTISING CAMPAIGN in the newspapers—that will explain in SIMPLE terms the securities it carries and explain why they are a good investment—will be amazed at the response they will get.

Talk to the people in advertisements as you would talk to your own friends, and they will give you their confidence and trade.

(To be continued.)

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"A little later I prescribed this water for the NAUSEA OF PREGNANCY on a patient with CHRONIC BRIGHT'S DISEASE OF THE KIDNEYS. It materially mitigated the suffering, and I believe kept her condition in a favorable state for the whole term. It has always increased the diuretic effect of alkalies and been of benefit to persons suffering with a LITHIC ACID DIATHESIS. In my own person, I am sure it has warded off two attacks of NEPHRITIC COLIC, and relieved me of an EXCESS OF URIC ACID. There is never a day now that it is not used in my house. A patient, who has been a dyspeptic always, is signally benefitted by LINCOLN LITHIA WATER. It most assuredly then does correct and control the disposition to an excess of lithic acid; it does relieve atonic, gastric indigestion, and it does, as a result of one or both of these improvements, build up the general system, improve the appetite and digestion. It is as well a most delightful drinking water, no amount of it that one can take ever giving the consumer the uncomfortable sense of fullness that follows very large draughts of water generally. The high percentage of lithia and the comparatively low percentage of other mineral ingredients, especially lime and soda, make the indications for its use by gouty and rheumatic patients the more pronounced. When the water is more thoroughly known, its virtues will not fail of appreciation."

A. W. KNOX, M. D., Raleigh, N. C., Member N. C. Medical Society: "I have used the LINCOLN LITHIA WATER quite extensively in my practice during the past five or six years. In the URIC ACID DIATHESIS; in controlling the tendency to NEPHRITIC COLIC, in DYSPEPSIA, in ALBUMINURIA, and I have come to regard it with great confidence. Indeed, so highly do I appreciate its efficiency in the disturbances of the RENAL FUNCTIONS, that I regularly prescribe its systematic use to the exclusion of ordinary drinking water as a PREVENTIVE OF RENAL COMPLICATIONS during the last three or four months of pregnancy in the cases of all my patients who can afford it.

A pure Natural Spring Water, endorsed by emineat medical authority, For Stomach, Intestinal, Kidney and Bladder Troubles.

In cases of 12 half-gallon bottles and 5 gallon demijohns. For sale by druggists, grocers and mineral water dealers, or

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For Making Cake

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¶ Snowdrift is a wholesome shortening, useful and economical. It is 100 per cent cooking value, as it is *pure fat*. Results entirely satisfactory, if you add a little salt.

¶ Fry onions in Snowdrift; strain, and then fry chicken in the same Snowdrift; the chicken will not taste of the onions, because Snowdrift is odorless and tasteless, and cannot absorb odors.

¶ Butter will burn at a temperature of 300 degrees; Lard 340 degrees; Snowdrift not until 400 degrees. Burning fat is useless.

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For nearly eight years I suffered with rheumatism—at times unable to walk. I am taking Milam with great benefit, as I am enjoyable to walk and suffer no pain. Mrs. Ira R. Preston, Abingdon, Va.

Rheumatism affected my heart until I could not lie down without such pain that I could hardly bear it. Milam has made me feel like a new woman. Mrs. J. F. Brown, 611 N. 5th St., Richmond, Va.

For 12 years I was confined to my bed the greater part of the time with rheumatism. Milam has been a Godsend to me. I now walk about my farm—the swelling has left my limbs and joints reduced to normal size. F. L. Grimes, R. F. D. 1, Chincoteague, N. C.

I have been a great sufferer with rheumatism and for several years unable to attend to my duties continuously. Six bottles of Milam made a new man of me. Claude Curling, 149 E. Main St., Norfolk, Va.

I spent over $2,000 for rheumatism with no benefit whatever until I tried Milam. It has done all you claim for it in my case. I. H. Wade, corner Church and Lee Sts., Norfolk, Va.

For a long-standing and aggravated case of rheumatism I am glad to say I received more benefit from the use of Milam than all the other treatment extending over a period of ten years. C. F. Burger, with W. M. Ritter Lumber Co., Huntington, W. Va.

Since taking 3 bottles of Milam my rheumatism is entirely gone, my complexion and appetite improved—I wouldn't take $50 for the good it has done me. A. McBride, Danville, Va.

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