

OUR BIG PANAMA SHOPS

Where Jamaica Negroes Work Under Americans Repairing Old French Machinery Valued at Millions.

(Special Correspondence of the Deseret News by Frank G. Carpenter.)

BAS MATACHIN, Panama.—Take a look at the biggest machine shop half way between the Atlantic and the Pacific in the mountains, high up from the sea. It covers acres and under its galvanized iron roof a network of wheels is humming away at the rate of a hundred revolutions a minute. The floor is covered with moving machinery and gangs of Americans and natives are at work. Here they are grinding old French locomotive wheels into new ones; there they are drilling holes through iron plates and bars and further on steel planers are shaving off iron as though it were wood. Traveling cranes moved from the roof, pick up steam engines and other enormous weights and carry them from one part of the shop to the other, while in the foundries, adjoining, the boiling metal bubbles and seethes as it is carried from the furnaces by Jamaican and Colombian laborers who are making castings of more than a ton in weight. Outside the shop the ground is covered with acres of car wheels, iron dredge buckets and steel rails. The warehouses nearby contain more than a million dollars' worth of pumps, dredges and machine tools, and the whole is like one of the great industrial institutions of Pittsburgh or Chicago, rather than a repair shop in the heart of the backwoods of the Isthmus of Panama.

THE SHOPS AT EMPIRE AND COLON.

Bas Matachin is the chief shop for the work at Colon. It is where the old French material is being made into new for use on the canal. There are other shops at Empire and there are also shops at Colon itself, where the actual work of excavation is in progress. At Empire there are fully six acres of buildings and storage tracks, and there are 50 locomotives, several hundred cranes and a vast number of dump cars. At Colon 100 mechanics are making light repairs on the 1,300 cars, 30 locomotives, seven excavators and the new steam shovels which are working there. We have also big machine shops at Colon on the Atlantic and some at La Boca on the Pacific. We have a saw and planing mill running at Colon, making the lumber for the new buildings and repairs, and there are the smith and blacksmith shops for the same purpose at Ancon on the edge of Panama. Indeed, the man who thinks nothing is being done on the Isthmus has but to see these shops to learn his mistake.

A TALK WITH ENGINEER STROM.

I am here at Bas Matachin with Mr. Carl A. Strom, the mechanical engineer of the commission. He has charge of all the machinery of the Isthmus, and it is his duty to keep it in repair. The commission has told him to get what he can out of the French supplies, and he is doing this with a corps of mechanical engineers, American foremen and a large number of native laborers. Mr. Strom is one of the strenuous young men of Uncle Sam's corps. He is about six feet in height, broad-shouldered and muscular, and he looks as though he could defy malaria, yellow fever or any kind of hard work. He is a Swede by birth, was educated at the Royal Polytechnic Institute of Stockholm, one of the best engineering schools of the world. After his graduation there he came to the United States and learned the English language while acting as engineer for the Chesapeake & Ohio and Southern railway. When that road was merged in the Illinois Central he went with it, and soon became the mechanical engineer in chief of that system, with its enormous shops and 5,000 or 6,000 miles of track.

FOUND IN THE JUNGLES.

Said Mr. Strom: "We found these shops in the jungles. We did not know they existed when I came here last June, and it was only when Colonel Hecker and I made a trip across the Isthmus to look at the French machinery, that we discovered them. We had stopped at Gorgona, and, while moving about there, noticed the corner of this old building peeping out of a dense vegetation. We made our way to it through a mass of car wheels, dumping buckets and other machinery, and found a structure covering about a half dozen acres, containing a complete equipment of machine tools for a big repair shop. There was not a thing lacking. All we had to do was to put new foundations under the machines, clean them up and start the stationary engines running. After that we began to clean up about the premises. We had a gang of machete men cut

down the jungle and clear out the vegetation about the buildings. It took us almost three weeks to do this and get the machines in running order. We then began to organize our force, and we now have a repair shop that I would not be ashamed to show to the mechanical engineers of any American railroad."

"What kinds of work are you doing?" I asked. "Almost everything is the line of repairing," was the reply. "We have 300 men at work repairing general equipment and all kinds of other machines, and in the canal work our capacity just now is seven locomotives and 115 cars per month. We have already repaired about 1,000 of the old French dump cars, and they are now in service at Colon. Most of these were badly broken and rusted out. We renewed the timbers and replaced the missing parts. We repaired a number of locomotives, and now have between 30 and 40 of them in use, and we have also been doing a great deal of fitting up of boilers, engines, concrete mixers and other things for the water-works and several departments. We are repairing cranes, excavators, drills, dredges and all sorts of things."

FRENCH MACHINES VS AMERICAN.

"What is the character of the French machinery, Mr. Strom?" I asked.

"It is excellent of its kind, but much of it is now obsolete having been supplanted by better inventions and by American improvements. When it was put here 20 years ago it was absolutely modern, and the finest that could be purchased. As it is now, much of it is good, and when it is sprinkled with additional tools from the states we shall have machine shops inferior to none. Take the French locomotives. These which we are now repairing are of Belgian make. They are well designed and of superior workmanship, but they are complicated and in some ways hard to maintain. We can use them, however, and are repairing them for Colon and other points."

"We are also repairing the old French excavators, which, by an endless chain of buckets, scoop up the earth and load it on the cars. These are now in use, and Chief Engineer Wallace will probably continue to use them until he has enough steam shovels or other superior American machinery to take their place. Just now when our machinery has not come from the states much of this old French stuff can be used."

"Indeed it is hard to estimate the value of the material which we got with the canal. The equipment of the shops here is, I judge worth, at least a quarter of a million dollars."

"How about your labor, Mr. Strom?" "We have American foremen, with natives under them. We have some Jamaica negroes, who are skilled mechanics, and who are especially good blacksmiths. We have one blacksmith whom I will put up against any white blacksmith anywhere. The majority of the Jamaicans, however, are worthless as far as skilled labor is concerned. We can use them for rough work only."

"What other races do you employ?" "We have a number of Spaniards, some of whom are superior to the mechanics from the states. We have some Frenchmen and a large number of Colombians. We have a Spanish locomotive gang, a French gang and an American gang. We work them side by side, and each tries to see whether it cannot do the most work. So far the French play second fiddle to none."

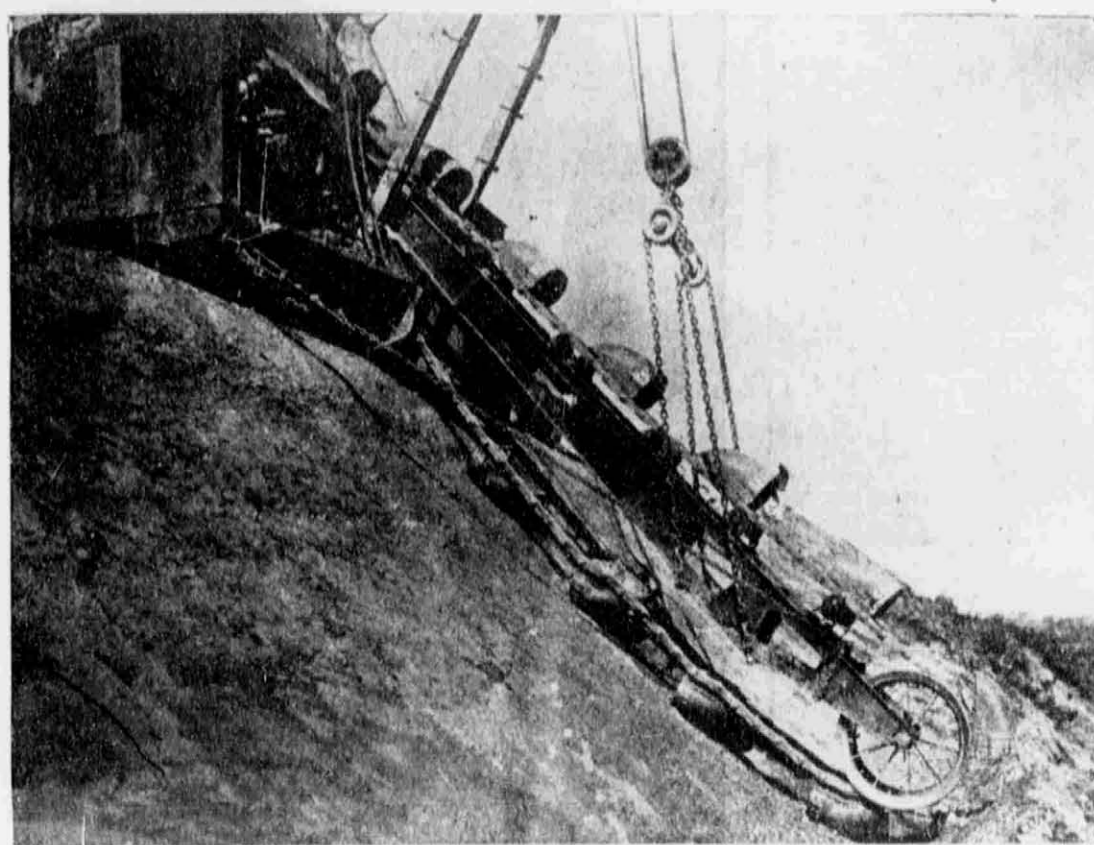
"Are your men interested in their work?" "The Spaniards and French are much interested."

"How about the Jamaicans?" "We have to have them all the time. They have no energy and no individuality. They drag along waiting for the whistle to blow."

AMERICANS IN PANAMA.

"What is the character of your American labor?" "We have about the same class of workmen here that you find in the states, and use them, chiefly the foremen. We pay them 45 cents gold an hour, and in addition furnish them free quarters. This is about 25 per cent more than they receive in the states. We pay the common laborer from 15 to 40 cents an hour in silver, which is equal to from 7½ to 20 cents an hour gold. The Jamaican mechanics get more."

"Can Americans work here in the tropics?" "I think so, especially under cover, as in the shops. Bas Matachin is high and healthy. We have but little sickness, and have had almost no malaria since the vegetation was cleared away."



ONE OF UNCLE SAM'S BIG ISTHMIAN EXCAVATORS.

(Photographed for the Deseret News by Frank G. Carpenter.)

We want the very best American mechanics we can get, and I think they will eventually be satisfied with their pay and their accommodations."

"What kind of men have you in your engineering corps?" "We have a large number of college graduates who are starting out to make a place for themselves. We have men from Cornell, Purdue, Ann Arbor, the Illinois State university and the Boston School of Technology. They are mechanical engineers getting their first

practical experience, and as a rule they are doing well."

"Is this a good place for such men?"

"Yes. The Isthmus now offers unlimited opportunities for the training of young engineers. We have all sorts of mechanical difficulties to overcome, not only in carrying on the work itself, but from the lack of materials and the working over of this old stuff into new. Such things bring out a man's ingenuity and develop his brain cells. Indeed I do not know of a better school for an

engineer graduate than right here on the Isthmus."

Speaking of the old material, quite a lot of it has been used by the sanitary department in one way or another. This is so as to mattresses. The commission found a great lot of old hair bunched up in the warehouses. It was put into a vat and boiled and cleaned. The result was 500 good hair mattresses, which did not cost over \$4 apiece. They could not have been bought at home for five times that money."

A Talk With Mechanical Engineer Strom—The Old Dredges Versus the New American Shovels—Jamaicans and Colombians as Workmen—Our American Mechanics—Panama a School for Young Engineers—Some French Extravagances—Six Tons of Steel Pens and a Hundred Tons of Drawing Paper—A \$15,000 Pig Pen—The New Roads and How They Are Built.

The sanitation officers needed a launch, and it would have cost them \$7,000 had one been ordered from the states. They took an old boat at La Boca and by an expenditure of \$329 fitted out a vessel which does very well. The same department required a boat to carry their disinfected clothing and baggage similar to the ones used for that purpose at Hatteras. They took an old hull with a crane upon it, and it serves the purpose at one-third the cost of a new boat.

FRENCH STATIONERY.

Among the other valuable things left by the French is a great amount of stationery. They bought things by the ton, and this was so of the drawing paper. In the basement of the administration building at Panama lies a carload or so of drawing sheets, each as big as a center table. The draughtsmen tell me there is more than can be used for all the drawings that can possibly be made for the canal work, and that the remainder will be worth thousands of dollars.

In the same basement there are lithographs and lithograph presses, all of which have been brought into use by the commission. The canal printers work night and day. They make all the blanks used in the work; they print all the reports, and upon the lithograph presses they are reproducing drawings and plans.

There are hundreds of letter presses scattered through the warehouses here, and there are also about six tons of steel pens, so rusty that they are good for nothing. Some of these have been shoveled out into the ocean, and the balance, one of the builders facetiously says he intends to use for making steel concrete.

FRENCH EXTRAVAGANCES.

These six tons of pens give one an idea of the extravagant methods of the French. During the earlier years of the canal they bought everything in enormous quantities, and the belief is current that the clerks received a commission on their orders. Money flowed like water, and purchases were carelessly made. For instance, at one time a quantity of bolts and screws were needed of a special pattern. A model of wood was made to indicate the shape and the wood was painted black to show that the screws were to be made of iron or steel. In issuing the order, however, no mention was made of the material. It was simply stated that the goods were to be according to sample. A few months later they came on, barrels and barrels of bolts and screws

made of wood painted black. They were according to sample and had to be paid for.

A \$15,000 PIG PEN.

Some of the greatest extravagances were in the buildings. Ordinary cottages stand on costly cement foundations. At the Ancon stables there is a bath tub made for the horses which is 15 feet wide, 75 feet long and 4 feet deep. It is so arranged that water can be easily let into it. It was the custom of the French engineers to have their racing ponies washed off in this way instead of currying them. There were also costly chicken coops, and what I judge is the most costly hog house on record.

Riding up Ancon hill the other night I discovered it. I had passed the hospitals and took a road that led off into the jungle, supposing it would bring me down the hill on the other side. The road was paved and guttered, and Mr. Johnson, who was with me, estimated that it must have cost at least \$15,000 a mile to build. We followed it, and its end was a pig pen. And such a pig pen. It was 200 feet long, 100 feet wide and built entirely of concrete, with iron supports upholding a galvanized roof. The pen was divided into compartments, each of which had its cement trough, and it was, all told, large enough to have accommodated 500 hogs at one time. I asked Mr. Johnson what it would cost to build such a structure, and he replied that a low estimate would be \$15,000. Similar extravagances are to be seen everywhere.

NEW ROADS FOR PANAMA.

Speaking of roads, the commission is rapidly building them about Ancon hill. They will construct a highway to the Savannah, a beautiful riding country four miles from Panama, and will probably repave the whole of Panama City. The road-making now going on is through an old stone crusher, which the supervising architect has erected on the side of Ancon hill, below a natural quarry. The rocks are rolled down the hill into a receiving platform, and thence fed into the jaws of the crusher, being distributed by a shaker into the several sizes needed for rock foundations and road work. This crusher was made up out of old material left by the French. The jaws came from one place, the steam engine from another, and the Deaneville cars and track from a third. Altogether, they form an excellent machine, which works quite as well as though its parts were all new and freshly imported from the states. FRANK G. CARPENTER.

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