MARVELOUS PROGRESS OF ISTHMIAN CANAL

By EDWARD B. CLARK

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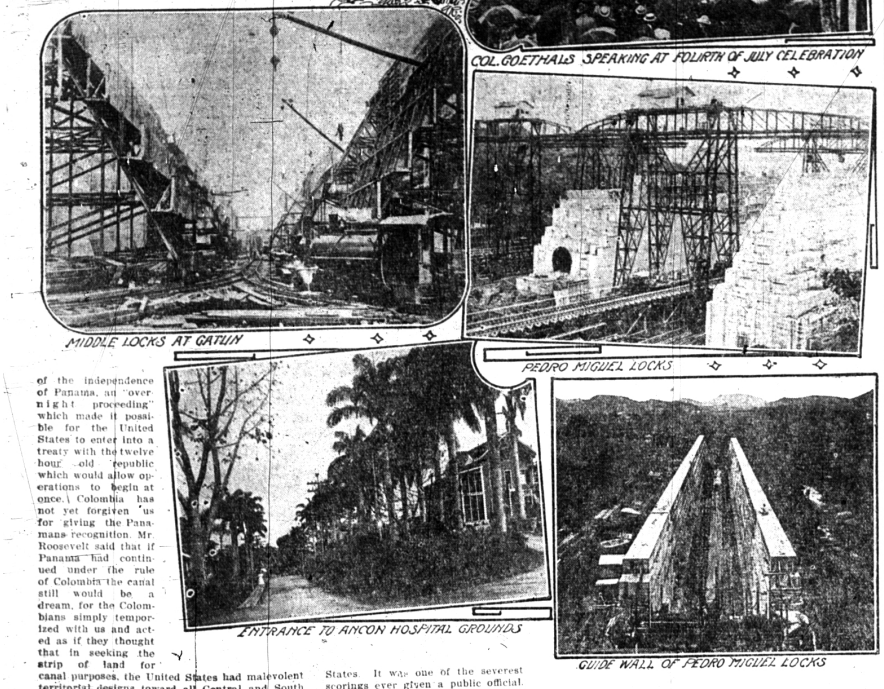
PRESIDENT Taft's word of hope that the Panama canal may be opened for traffic two years earlier than the time tentatively set by Chief Engineer George W. Goethals seems to have redirected the attention of the people to the marvelous (word used advisedly) progress of the isthmian venture since the time when it was finally definitely determined that a waterway was to be opened through Panama and not through its sister State, Nicaragua.

Former President Roosevelt recently has defended vigorously his action in the case of the recognition



of the independence of Panama, an "overnight proceeding" which made it possible for the United States to enter into a treaty with the twelve hour old republic which would allow operations to begin at once. Colombia has not yet forgiven us for serving the Panamans recognition. Mr. Roosevelt said that if Panama had continued under the rule of Colombia the canal still would be a dream, for the Colombians simply temporized with us and acted as if they thought that in seeking the strip of land for canal purposes, the United States had malevolent territorial designs toward all Central and South America.

No one had any conception that progress on the canal would be as rapid as it has proved to be. Much more time was spent in talking prior to the beginning of operations than has been spent since in digging. Now that it is long in the past, the country is perhaps forgetful, but it may be of interest to remember that for many weary months the congress of the United States gave itself over to debate, discussions and even bickerings upon the relative values of two routes for the waterway, the Nicaraguan route and the Panama route.

Senator Morgan of Alabama, who died a few years ago, was an advocate of the Nicaraguan route. He was an old man at the time that he undertook to voice sentiment and argument on behalf of the more northern waterway. He worked night and day, studying the questions involved from every possible viewpoint and the long speeches which he made on the matter in hand were written almost entirely by his own hand. He was indefatigable in labor, and what he did on behalf of the Nicaraguan route and on behalf of the waterway scheme generally is best told in the words of Senator Jonathan F. Dolliver of Iowa. Dolliver, like Morgan, is dead. The Iowan was in favor of the Panama route, while the Alabaman was in favor of the Nicaraguan route. The two men were opposed to each other politically, but they were personal friends. When bitter disappointment came to Morgan in the final defeat of the Nicaraguan project, Dolliver rose in his seat and paid this tribute to his aged colleague:

"He stands here in his old age, one of the historic figures connected with this canal controversy. He may not be the man who began the discussion, but for nearly a generation he has kept it up. No man has ever exhibited within our knowledge any such marvelous industry, energy and sagacity as he has put into the argument for the Nicaraguan canal. Day and night he has labored, not with the assistance of others, but personally, often with his own pen writing the speeches which have become the chief part of the agitation which has resulted in unifying public sentiment in the United States in favor of the canal.

"I regret more than I can say that he was disappointed in his own personal ambition in respect to the route that finally was chosen, but that does not prevent me from adding that long after the little controversies of this hour are forgotten, his name will be connected in immortal reputation with the Isthmian canal, wherever it is built."

Few people probably have forgotten the first attempts of President Roosevelt and Secretary of War Taft to secure the service of a civilian engineer who would stick at his post until the Panama canal was dug. Three great engineers, one after another, resigned their positions as engineers-in-chief.

It is perhaps useless to discuss the causes which led to the resignations of the civilian engineers. All sorts of stories were told, from the fear of yellow fever to inability to maintain discipline in the working forces. It is probable that one engineer's ears tingled for a long time with the rebuke which was given him by Secretary of War Taft, who is now the president of the United States. It was one of the severest scorings ever given a public official.

Probably the country does not know the inside history connected with the final employment of army engineers to build the Panama canal. The engineer corps of the army at the outset thought that it should be given charge of the canal work, but influential civilians brought pressure to bear on the administration on behalf of engineers in civil life. It was said by certain civilians of prominence that the army was not accustomed to handling great business propositions and that no army engineer ever had done a work of anything like the magnitude of the one proposed. There were all sorts of attempts to belittle the engineering work of the army.

This sort of thing had its effect, although it is probable that it was with considerable reluctance that the administration disappointed the proper ambition of army engineers to be assigned to the work of canal building. When three civilian engineers, one after another, had given over the work, President Roosevelt and Secretary of War Taft concluded that the time had come to give the army a chance. In effect the president told the secretary that no army officer would desert his post, even by the resignation route, for discipline and inculcated will to do his duty would keep him at the digging until it was finished, or until failure had come. Moreover, it was known that no army officer would flee in the face of yellow fever or in fear of death from any cause.

Colonel George W. Goethals of the West Point class of 1880 was selected by the secretary of war to take up the work that the civilian engineers had dropped. Colonel Goethals is still at it and success has marked every step of the way. The colonel chose at the outset as two chief assistants, Lieutenant Colonels David D. Gaillard and William L. Sibert, who graduated from the military academy in the class of 1884. Since that time other army officers have been detailed in addition to the three who were first assigned, three who are still working—and who hope to be present when the first ship pokes its prow into the completed canal.

Colonel George W. Goethals is a tall, slender man with a firmly knit figure and snow white hair. He has a face remarkably youthful and neither the climate, the hard work nor the anxieties of the isthmian life have touched his vigor. He is a sort of court of last resort in the isthmus. He travels from place to place on certain days and establishes headquarters for the hearing of complaints. He brings hard, common sense to bear on all kinds of matters, from the settling of a family row to controversies as to seniority in rank of some of the civilian superintendents. Laborers can go to him with complaints of bad food and be sure of a hearing, and also be sure that any kind of a wrong will be righted. He is a sort of a shepherd of the flock, a father of a family of 43,000 children.

Colonel Gaillard, who is the engineer in charge of the central division of the work, and Colonel William L. Sibert, engiher in charge of the Atlantic division, as has been said, were classmates at West Point. Gaillard's first name is David. When he and Sibert entered the military academy as "plebes" they took a great liking to each other. They were chums and confidants all through their cadet course. Sibert is a big man, physically, and the cadets nicknamed him Goliath. Gaillard always was called David, and so the military academy held a friendly David and Goliath, thereby establishing a better record for amity and friendliness than that contained in the Scriptures.

When the army engineers went to Panama to take charge of the work they knew that in order to make progress with the digging they must have a contented family of laborers. They also knew that they must maintain discipline. In the army discipline is maintained as a matter of course, the men who enlist knowing that they must submit themselves without question to the proper orders of their superiors.

The men who work on the Isthmus of Panama are mostly civilians, and Colonel Goethals and his assistants knew that they would resent anything like army disciplinary methods, even though they were intended for their benefit and would soon prove their worth. Goethals is a most tactful man. With his assistants, he secured army discipline on the isthmus without allowing the civilians even to appreciate that gradually they were coming under the guidance of rules laid down for men who wear the uniform of the service. The army officers worked at first in a suggestive way. Men were directed to "try" certain things and see how they came out.

Trial was made and then other suggestions were made and finally the big working force found that it was living a regular, healthful life with time for regulated recreation, and that it was possible to get pleasure out of existence by other means than by drinking it in. Suggestion rather than command made a disciplined force out of the forty-odd thousand laborers.

There probably is not a healthier place on the face of the earth today than the canal strip of the Isthmus of Panama.

Colonel William C. Gorgas of the medical department of the United States army is the head of the department of sanitation on the isthmus. Under his direction disease virtually has been killed and fear itself has been set at defiance.

A large part of the food for the isthmus is purchased in the United States and it is shipped under the most favorable conditions. A paper called "The Canal Record" is published at frequent intervals and its last page is devoted to a list of the food which can be obtained at the commissary department, with the prices affixed. Living on the isthmus is just as cheap if not cheaper than it is in this country and the food is of the highest possible quality. Many of the civilian employes constituting clerical and engineering forces have taken their families to Panama. They have fine quarters and they buy their food virtually at cost price.

The army was on its mettal when it was put in charge of the Panama canal building. Thus far, admittedly, its work has been nothing short of wonderful in all lines of isthmian endeavor. It may be that President Taft's prophecy will not come true and that the canal will not be opened until 1915, but it should be remembered that the latter date is the one set for the opening by Colonel George W. Goethals, the engineer-in-chief. It is probable, however, that he hopes to see the procession of ships, with the old Oregon leading, pass into the great waterway on some day within the next two years.

Euclid

Mr. Euclid was one of the deep thinkers of the olden days. He invented geometry, but never made much money out of it.

Geometry is a fascinating study, wherein you draw a circle and put in some straight lines through it, apply the letters A, B, C and D, here and there, and announce that you have demonstrated the theorem.

When Mr. Euclid began getting up geometry he simply whiled away his time on squares, triangles and parallelopipedons. He could speak familiar of hypotenuses, octahedrons and things of that sort.

Were he alive today he could do much better with his science. A congressional committee would be appointed to investigate the allegation that the square of the hypothenuse is equal to the sum of the squares of the other two sides. With Mr. Euclid as an expert witness and a keen lawyer to cross-examine him a tense state of excitement could be evoked, which would culminate in Mr. Euclid running for president on a geometrical ticket.

It is thought that Mr. Euclid first awakened to the possibilities of geometry by observing how many pieces could be made of a boarding house pie.

True to His Oath.

Magistrate—Now, can you describe the horse in question? How big was it, for instance?

Witness—It was sixteen feet, y'r honor.

Magistrate—Come, come! Remember you are under oath! Don't you mean sixteen hands?

Witness—Indeed, thin, it was hands I meant; and did I say feet, y'r honor? Ah, well, I'm on my oath, so we'll let it stand. Sure, thin, it was sixteen feet, y'r honor.—Punch.

REQUISITES FOR NEAT AND RAPID WORK AT KILLING TIME

Method of Farmer Who Thoroughly Understands the Business—It Is Necessary to Have Good Scraper, Sticking Knife, Hog Hook and Convenient Place to Labor in.

(By W. HANSON, Illinois.)

In order to do neat and rapid work at hog-killing time, it is necessary to have a good scraper, sticking knife, a hog hook and a place that is convenient for working.

For scalding, a barrel is commonly used, and it is all that is needed unless the hogs are very large. If very large hogs are killed, a scalding tub will answer the purpose for scalding much better than a barrel.

I have one which is make of two-inch planks for the sides and ends, and sheet iron for the bottom. It is six feet long and three and one-half feet wide, with a depth of two and one-half feet.

Two hooks are fastened near the top on one side, with a pair of trace chains to run under the hog, to facilitate the turning and withdrawing from the tub.

It is placed over a furnace, which is made by digging a trench in the ground, and when in use I place pieces of wood across the bottom, in order to keep the hog from coming in contact with the iron bottom and getting too hot.

I find that the proper temperature for good scalding is from 180 to 190 degrees, and if a barrel is to be used, the water should be boiling when dipped out of the kettle, as the barrel will cool it some.

If a scalding tub is used, the water should be cooled by adding a bucket of cold water before the hog is put in.

To insure a correct heat of the water, use a thermometer. Small quantities of lye, ashes or lime will have no effect in removing the hair, but will cause the scurf to come loose more readily.

A hog hook is almost indispensable, and if one is to be made it should be made in the form of a hay or bale hook. In fact, I find that a hay hook answers the purpose very well.

In handling the hog, stick the hook in the flesh of the lower jaw, just behind the fork of the jaw bone. However, the hook may be stuck under the tendons of the hind legs.

Keep the hog in constant motion while being scalded, and draw it out to air occasionally. When the hair and scurf slip easily from the body the scalding is completed.

In scraping and cleaning the hog, I clean the feet and head first, then the legs, and last but not least, the body.

I hang the hog with a rope and pulley, as it is more easily hung in this way than any other. But it may be hung with the ordinary gambrel, a stick which is sharpened at each end and inserted under the tendon strings of the hind legs.

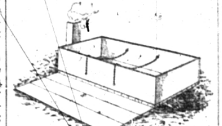
A short singletree will be found to answer for a gambrel-stick. If there is sufficient help at hand, the hog may be hung on a pole put up for the purpose.

After the hog is hung up, rinse it down with scalding water, remove the entrails by running a sharp knife lightly down, marking the belly straight, cutting to the bone between the thighs and in front of the ribs, which bones I split, with an ax, being careful not to cut beyond them.

Open the abdomen, and after a little use of the knife one will seldom cut the entrails in removing them.

However, I have a few short strings at hand to use in case any of the entrails are cut.

After removing the entrails, liver and heart, spread the carcass apart



Hog Scalding Tank.

with a stick and rinse it down with cold water. When cooled sufficiently, remove the leaf fat and kidneys and cut it up.

I usually salt down on a bench or in a box as soon as it has cooled enough to trim, but I never put any salt on the ribs and backbones if the weather is cool.

The amount of salt I use is ten pounds to every one hundred pounds of meat. In addition to the salt, I also use two pounds of granulated sugar and two ounces of saltpetre mixed.

Rub the meat once every three days with one-third of the mixture. While it is curing pack it, in a box in a cool room, where it will neither become warm nor freeze.

Two barrels may be used, changing the meat from one to the other each time it is rubbed. After the last rubbing let the meat lie in a box for a week or ten days, then take it out to smoke. When taken out of the box dip each piece in a kettle of boiling water and let it remain half a minute, after which sprinkle a little powdered borax on the meat side, and hang.

Smoke it four or five days with hickory chips or corn cobs, then dip and sprinkle it with borax again, and put it down in clean hay.

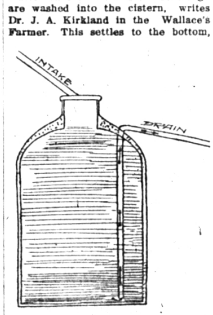
The hot water destroys any fly eggs that may have been deposited, and the borax prevents flies from depositing fresh ones.

Meat treated in this manner may be left hanging all summer and will remain in the best condition.

CISTERN THAT CLEANS ITSELF

Method Is Shown in Illustration That Carries Off Refuse Settling at the Bottom.

Cisterns are usually made of brick and cement mortar in the form of a jug. The water is let in at the top by conductors from the eve troughs of the roof of the house or barn. The soot, dust, leaves and other foreign matter on the roof and in the trough are washed into the cistern, writes Dr. J. A. Kirkland in the Wallace's Farmer. This settles to the bottom,



Self-Cleaning Cistern.

making a heavy deposit of slime and filth, and the water, which is always drawn from the bottom by the pump, comes up dirty and foul smelling. If the cistern is built as the illustration represents, it will be automatic in cleaning, as it will overflow from the bottom, thus carrying out the stale water and sediment that have accumulated below.

The cistern should be built in the ordinary way and cemented fully to the top. The conductor pipes should enter through the cover, a drain pipe leave the cistern just beneath the neck, or about three feet below the surface. Into this is cemented a galvanized gas pipe which extends downward to within about three and a half inches of a depression in the bottom of the cistern.

It will readily be seen that as soon as the water rises above the drain, it will begin by force of gravity to flow from the bottom up through the galvanized tube and leave the cistern from the bottom, thus sucking out the foul water and sediment from below and leaving the clean, fresh water at the top. I invented this device and have had one of these cistern in operation for seventeen years. The water has always remained pure and sweet, and without any attention whatever to cleaning. There is no patent and the additional cost of this simple and sanitary device is about two and a half to three dollars.

Unique Selling Plans.

A Long Island gardener has been shipping hampers of assorted vegetables to New York families. A uniform price of $1.50 a hamper (holding more than a bushel) is charged the year round. The plan is successful, although used on a small scale.

A New England gardener has built up a fine trade in supplying consumers in several cities. Deliveries are made by wagon. Families are supplied regularly and printed matter is distributed soliciting further trade. His business is well organized and this grower is prospering and says, "I now have more business than I can handle."

GUARD AGAINST WASTE IN FEED

Farmer Must Systematize Feeding So That Good Roughage Is Not Refused by Cattle.

Feed has grown to be so high priced that wasting it seems like squandering gold; yet the careless feeder wastes an enormous amount of feed every winter when a little watchfulness and sound judgment would save it.

When stock are fed a tempting grain feed before or at the same time they are given their roughage ration they invariably become somewhat dainty as to what they eat, picking out but the very best of the roughage and rejecting all the rest.

When this habit is once formed stock will often go hungry rather than eat what has been picked over and which really is very good feed. Therefore, one must systematize his feeding in such manner as to guard against the habit being formed.

This should in no wise be construed as meaning the feeding of foul or musty roughage, but at the same time we do advise one to feed so as to derive the greatest possible profits, consistent with the good health of the herd. For this reason we should feed the roughage before the grain or at a time when we know the stock to be hungry enough to eat all the roughage containing a certain amount of nourishment and we consider that the system saves us a great quantity of food supplies every season.

Avoid Relationship.

In breeding turkeys, relationship must be avoided. If the cock bird has considerable wild blood in him, the offspring will be stronger. Where in breeding is practiced, after a few years the young will be liable to have crooked breasts and other deformities.

Best Draught Horse.

As experiment station says that the closer a draught horse is to the ground the better both for service and endurance.

OFFICIAL INVITATION TO AMERICANS

HOW ROBERT ROGERS, MINISTER OF THE INTERIOR, IN WINNIPEG ADDRESS, ISSUES WELCOME OF AMERICANS TO WESTERN CANADA.

During the course of a reply to an address presented to Hon. Robert Rogers, the newly appointed Minister of the Interior of Canada, at a banquet given at Winnipeg in his honor that gentleman spoke on immigration. The tone of his remarks was that he intended to pursue an aggressive and forward policy in the matter of immigration. In part, he said:

"The most important branch perhaps of that department (Interior) is that of immigration.

"If there is anything more than another we want here it is a greater population, and it shall be my duty to present to the people in all parts of the world where desirable emigrants are to be found the advantages and the great possibilities of this country. We have received in the past a reasonably large immigration from south of the international boundary, and in this connection let me say just a word for our American cousins who have found happy homes amongst us, and those whom we hope to welcome in greater numbers in the years to come. There are hundreds of thousands of them in our prairie provinces, happy in the enjoyment of a freedom as great as they ever knew, and all contributing in a material way towards the development of Canada. We are not blind to their value as settlers. They come better equipped with scientific farming knowledge than most of our emigrants, and constitute without doubt the wealthiest class of emigrants any new country has ever known. As head of the immigration department it will be my privilege to offer them a welcome hearty and sincere, and to so contribute to their welfare that under the protecting folds of the Union Jack they will enjoy as great a degree of liberty and happiness as under the Stars and Stripes. The Borden government cherishes nothing but the kindliest feelings for the people of the great republic to the south, and will do all in its power to increase the bonds of kinship and neighborly good feeling that has so long existed. (Hear, hear.)

"While we adopt a vigorous emigration policy in that country, we will also adopt the same vigorous policy in other parts of the world. We will go to England, Ireland and Scotland, and every other country irrespective of race, creed or nationality, where we can find suitable, and desirable emigrants for this great country. I think much good work can be done in those countries, and especially perhaps at the present time in England, Ireland and Scotland. Now, then, it will be my duty to stir up that policy in the most vigorous manner possible."

A DIFFERENCE.

Tessie—I suppose you won't marry unless you find one girl in a million.

Tom—No; with a million.

I believe that the borders of our minds are ever shifting, and that many minds can flow into one another, as it were, and create or reveal a single mind.—W. B. Yeats.

Some girls would lose out, even if every year was a leap year.