CHAPTER VI

THROUGH CULEBRA CUT—ON A MOTOR CAR

The cheery beams of the tropical sun were already streaming into my room at the Tivoli when the jangle of the alarm-clock aroused me. The sun and the Americans are early risers in Panama, I was to discover. It is during the morning that by far the greater share of the work is done on the Isthmus.

From Panama to Culebra is a distance of nearly twelve miles. The Panama Railroad does not endeavor to cope with the speed of the trains at home, and it was three quarters of an hour after our start before I alighted at the Culebra station.

As I glanced uncertainly around me, a young man with a cheery voice hailed me from the edge of the platform.

"I am Major Gaillard's secretary," he announced. "If you will come with me, I'll take you over to the car." Major Gaillard is the division engineer, in charge of the Culebra section of the Canal.
It was in a cubby-hole of a garage, bordering the line of rails, that we found the motor. Peterson, chauffeur, machinist, and all-around man of information, was awaiting us with a broad grin of welcome.

"Ready?" I asked.

"In two minutes," he replied. "Here, Jim!" he called sharply, and his black boy sprang to his side.

"Turn-table!" continued Peterson briefly. In a moment a series of cleverly grooved planks were joined together in front of the motor, and the car was run onto a neatly revolving wooden track. As smoothly as clock-work, it swung around and the motor was gently deposited on the railroad, ready to spring forward at the touch of a lever.

"All in?" called Peterson curtly over his shoulder. Bending forward, he switched the starting gear into place, the car darted swiftly down the rails, and we were off.

We swung past the Culebra station, every moment adding to our speed. The morning air was whipping our faces with a pleasant, invigorating thrill, and the spirit of the swift dash was beginning to take firm hold of us.

Peterson slackened his pace as we neared the switch beyond and hurriedly crossed his hands
out over the side of the car—the silent signal to the workmen ahead that he wished to change into the adjoining line. On his side Jim was duplicating the action, which was soon to grow familiar to us.

It was at Whitehouse, a small dot of a station between Culebra and the neighboring point of Empire, that we again swerved our course, and Peterson cried, "We are entering the big Cut now. Keep your eyes open, Jim!"

The need of the warning was soon apparent. Within the space of the next eight miles over one hundred locomotives were backing and switching, often barely grazing each other as they darted to and fro in the swirling mist of their own steam. A collision might come at any moment even with the experienced hand of Peterson guiding us.

Attached to scores of the engines were long rows of dirt cars, partially filled, every moment adding to their great loads of clay and rocks. "There are more men killed on the Panama Railroad dodging dirt trains than from any other cause," Peterson grimly informed us. Which was pleasant intelligence, as we darted down past the bumping rows of swaying cars and they darted down past us, the motor and the trains really
playing an exciting game of "hide-and-seek" or "prisoner's base."

The towering walls of Culebra Cut were now rising above us, their great, rugged faces seeming to scowl in baffled rage at the army of sweating men below, who day by day were ploughing deeper and farther into their sides.

For centuries these great, swollen mountains had defied the assaults of men, laughing at the efforts to bore a passage through their rocky ridges. And now the men, in their turn, were laughing at the efforts of the bullying mountains to check their advance.

Have you ever studied the picture of a noted battle-field? Do you recall the thick clouds of smoke, the spurting cannon, the stacks of rifles, the heaps of dead and wounded men?

Change the field of battle to Culebra Cut. You will see the same thick, black clouds of smoke. Instead of the belching cannon, you will find a hundred times more deadly instrument in the giant dynamite blasts. The monster steam shovels, the great levellers and air-drillers are the weapons of warfare, and the opposing forces are the armies of man and Nature. It is not one battle, but a series of daily battles, and they are all to the death.
WEST SIDE OF CANAL AT BAS OBISPO, SEPTEMBER 19, 1907, BEFORE FIRING 9600 POUNDS OF BLACK POWDER
Hundreds of men, thousands of men are before and behind and around us—black men, white men, yellow men, red men—men with their coats and shirts and collars off, with grimy hands and perspiring faces and straining shoulders—men to whom a dozen different languages might be addressed without finding their native tongues.

Over all tower the great, scowling cliffs, before you is the constant swirl of brown smoke, and on every side the screech of shrill locomotive whistles, the hoarse shouts of toiling men, the grinding crunch of the steam shovels.

Peterson turned suddenly as we worked our way in between the overhanging cliff walls—our speed was now little more than a bare, zig-zagging crawl—and cried crisply, "We're coming to one of the largest steam shovels on the Isthmus. Do you want to stop?"

In answer to my nod, the motor paused and I sprang out onto the ground, at close quarters with my first steam shovel.

If you can imagine pounds magnified to tons and can conceive of a monster iron scoop that can handle these tons as easily as you can handle an ordinary baseball, if you can picture such a gigantic machine so cleverly constructed that it is possible for one man to swing the great
The Conquest of the Isthmus

dipper where and when he pleases, you will have a dim framework of the American steam shovel as it is operating at the "Big Ditch." Can you go a step farther and imagine the man placed in such a position that he is hidden from view, the monster scoop seeming to work of its own accord—a great, rough creature of iron and steel suddenly given the power of life?

If you can, you will have an even better idea of what the steam shovel really is.

I clamored across onto the half-filled dirt train beside the motor that I might get a closer view. As I did so, the iron dipper struck a mammoth boulder half buried in the red clay below.

Deeper and deeper, its four iron teeth worked their way into the sticky mud at the base of the great stone. The boulder suddenly leaned over under the weight of the scoop and then, as I gasped, it was lifted bodily from the ground—wedged tightly between the gaping iron jaws. The shovel gave a terrific upward jerk, and almost before I realized it, the huge stone was being suspended in the air above my head.

"Jump!" shouted Peterson from the motor. "Great Scot, man, that boulder weighs twenty tons!"

I didn't wait for additional explanation.
SAME VIEW AS PRECEDING AFTER BLAST HAD DISPLACED 29,640 CUBIC YARDS OF ROCK
With the most rapid side step I think I have ever made, I sprang to the ground, and none too soon.

The next moment the flap of the dipper opened, and the boulder dropped into the flat-car with a dull thud.

But it didn’t stay. Hardly had it settled on the clay when it turned on its side, rolling ponderously toward the ground.

The steam shovel was n’t idle, however. With a slow awkward movement it again swung around, its iron edge striking the rock with a force that carromed it sharply over in the other direction. And then, as though the boulder were suddenly fired with electric energy, it plunged off toward the opposite end of the car, every instant gathering new force. Again the steam shovel worked around, and this time with a resounding jar dealt the giant slab of granite another blow.

The boulder’s course was abruptly checked, but only momentarily. A third time it commenced to roll, plunging toward the ground with even greater velocity than before.

It was a thrilling crisis for the layman.

With a jerk as though it had gathered all of its energies for a final spurt, the great shovel pivoted about, hesitated as if measuring the most effective
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spot at which to strike, and literally grappled with its granite opponent.

The boulder's massive strength drew a ringing crash from the iron dipper, but it had brought up against an obstacle it could not move. It was vanquished. Slowly the steam shovel withdrew, hovering in the neighborhood a moment, ready for another attack. But the stone was firmly lodged this time. The dipper had done its work well.

"How many miles of track would you guess have been laid on the Isthmus?" queried Peterson as our car threaded its way beyond a more than usually active row of dirt trains.

"Possibly a hundred," I suggested.

He laughed as he shook his head.

"You will have to multiply that number by four—and then add some," he rejoined. "There are 448 miles of rails in Panama—in a distance of just forty-seven miles. In other words, we often have twelve and fifteen tracks in a row. There are fully this many before us now."

During a lull in the activity around me, I glanced at the cliff above. Its scarred, jagged surface showed nearly every color of the rainbow. Here was a surface of gray, there a bright scarlet hue, yonder a line of tan, to the left a dark slate color,
CULEBRA CUT, LOOKING SOUTH, FEBRUARY, 1908
below a flaring yellow—the blending outlines of the different strata of dirt uncovered in the ever-deepening excavations.

"There is the famous Gold Hill to our left," explained Peterson.

"Gold Hill?" I repeated.

"The point from which Balboa discovered the Pacific," the chauffeur added. "The ocean is twelve miles from here," he continued. "You can see it easily on a clear day—but I wouldn't care to have had Balboa's trip to reach it, eh?"

I wondered curiously what the explorer's feelings would have been could he have pictured the present scene in Culebra Cut. Assuredly he would have termed the steam shovel a fabled giant lurking in the Panama wilderness like the dragons of old.

It was easy to see now that we were approaching the end of the great Cut. The cliffs had broken off sharply, and the number of workmen had abruptly lessened. Peterson brought the car to a sudden halt, the turn-table was again brought into play, and we were switched off at right angles to begin our circling way back to Culebra through the dark undergrowth of the jungle.

Faster and faster grows our speed. Now the wheels seem fairly to be burning into the rails, and
we tear through the heart of the wilderness at a speed that is eating up forty-five miles an hour! There is a clear track ahead, our white flags are held stiff against the breeze, and for the moment the thrill of the wild dash is our only sensation.

At our side the trees shoot by like a solid wall—we catch a confused glimpse of an occasional monkey chattering impudently at us, the sweep of a bright-plumaged bird, and the flash of a flower, but we have no time for details. We almost feel that we are devouring space.

It is barely half-past ten, and we are scheduled to board the 10:45 train for the Gatun Dam, thirty miles down the line. This thought is in Peterson's mind, as he jerks out:

"We'll make it nicely!" And we did.
CHAPTER VII

SCORPIONS, TARANTULAS, AND THE "T. T.'S"

We had just time to shake hands before Peterson turned the speed lever and darted back down the switch to the garage.

It was nearing one o'clock when our train pulled into the Gatun Station, and we descended to the platform. A negro driver was awaiting us in the big Government wagon, and he cracked his whip merrily and urged his mules into a lively gait as we clambered inside.

We reached the Government hotel in time for luncheon and the warm greeting of O. T. Marstrand, the genial assistant supervisor of "Labor and Quarters," who had been assigned to meet us.

In the rain we set off to see Gatun, a compact little toy village perched on the side of a steep clay hill. Through the mess kitchens and sleeping quarters of the white and black workmen we made our way—spick-and-span buildings where a stray
The Conquest of the Isthmus

thread or clot of dust, catching the keen eye of the inspector, would cause as severe a rebuke as in the regular army itself.

It was in the mess kitchen of the white, or "European laborers" as they are officially termed, that we recorded a startling incident not on our programme.

The supervisor, W. T. Virtue, had been explaining to us, in his brisk, businesslike way, the details of his interesting department when he reached over his desk and held up to view an empty lye can.

"Here is an unique curiosity," he smiled as I took the can gingerly.

I thrust back the cover, holding it in my left hand as I peered within. At the bottom crouched a shining black spider—as I fancied at first, except that it was three times as large as any spider I had ever met before.

"What is it?" I queried, as I continued to gaze at the strange object with a curious fascination even while some vague instinct sent a shiver of repulsion through me.

Mr. Virtue in answer thrust a long, slender stick into the can.

Instantly the spider sprang into motion. A bead-like tail darted toward the stick with lightning speed.
THE CUT AT BAS OBISPO, LOOKING SOUTH, JUNE, 1908
"We have a genuine specimen of the deadly black scorpion before us," announced Mr. Virtue quietly. "Its sting is certain death! There is absolutely no antidote. If your finger had been that stick——"

At that instant, the crouching scorpion leaped toward the top of the can, its tail distended, its body a-quiver.

With a gasp I dropped the receptacle onto the table, snatching my hand away just as the spider struck at the spot where it had rested.

I had been within three inches of death!

In spite of the dense humidity and the fact that a moment before I had been perspiring, I suddenly felt a cold chill.

"A close shave," muttered Mr. Virtue as he clapped the cover shut. "Almost as narrow an escape as you could experience from our friend over here."

As he spoke, he extended another can, and, deftly throwing back the lid, revealed a furry, black-gray creature within, apparently devoid of the power of motion.

But as he thrust his stick toward it, we saw a startling change. With a rapidity rivalling that of the scorpion, the occupant snapped outward
and upward, its ugly little body working convulsively.

"Allow me to introduce the tarantula," continued Mr. Virtue; "you will find him almost as ugly a customer as the scorpion. There is just a possibility of saving the life of its victim, if prompt measures are used. In the case of the scorpion, however, there is no hope. The person who feels its bite is doomed."

It was on our return route to Panama, while the lurching train of the Isthmus Railroad ran a race with the setting sun, that we met a quartet of the sun-browned men of the jungle whom the vocabulary of the tropics calls "T. T.'s."

Real "soldiers of fortune," with an emphasis, are these big-hearted men of the great out-of-doors, whose cheeks are tanned by the four winds, whose shoulders are broadened and muscles hardened by long toil in the forests and mountains.

These are the men who prefer a tent to a house, who have built the wonderful railroads of the jungles, who have constructed bridges in countries that have yet to know a railroad, who have located the rich gold and silver mines of the earth that are making new millionaires each year—the men who because they have drifted from one end of the wilderness to the other are dubbed in
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the language of Panama “T. T’s,” or Tropical Tramps.

There are scores of these men at the Canal whose varied experience is tested to the utmost in the problems of excavating and transporting the millions of cubic yards of dirt and clay from the great waterway and the handling of the steam shovels and dynamite that are tearing their way through rock and jungle.

Our friends of the “T. T.’s” are already beginning a lively chat, as one divests himself of his khaki coat, and they settle into more comfortable positions for the trip. There are four of them—Turner, the civil engineer, who has passed the last four years in the wilds of old Mexico—Bradley, railroad construction boss, who has the reputation of getting more work from the lazy Jamaican negroes than any other man in the tropics—White, mining engineer, who has visions of the future gold mines of Colombia—and slow-speaking Endicott, who has been into and out of more scrapes in the Central American jungle than you could tell about in a large-sized book. As their big brown hands close over yours, and their eyes light up with that electric smile which is bred in men who have lived long on the outskirts of civilization
and the borders of nowhere, you know that they are glad to meet you. Just the sort of companions you would choose for this trip across the Isthmus, eh?

"I imagine you have some thrilling adventures with dynamite down here," I suggested as the conversation lagged.

White half closed his eyes.

"Dynamite is the most dangerous plaything that man ever handled," he responded, "and yet when a chap carries a fifty-pound case around with him every day for a year or two, he somehow forgets that Death is grinning at him over his shoulder.

"I remember an incident of a few months ago. We were standing on the edge of Culebra Cut watching the steam shovels below us. A short distance off, a gang of workmen were getting ready to discharge a blast. The alarm was given as the fuse was lighted, and those who happened to be in the neighborhood suddenly remembered an engagement elsewhere.

"You know the sort of silence that falls around you when something big is about to happen? Well, for a minute you could feel the stillness.

"And then right under us there came a lounging West Indian negro down the track,
STEAM DRILLS AT WORK IN BAS OBISPO
carrying a big case of dynamite over his shoulder, shuffling along with his head down. Somebody shouted at him, but he did n’t glance up. Farther and farther down the ties he kept on, every step bringing him nearer to the sputtering fuse.

"Suddenly he stopped and drew out a bright red handkerchief. As he wiped his perspiring forehead, he coolly deposited the powder case on the ground and sat himself down on it—less than sixty feet from the blast!

"In another moment the deadly powder would be reached by the creeping flame, there would be a deafening roar, and then—Great Scot! What would happen to the men in the neighborhood if the negro’s dynamite case should explode? Somebody gave a husky shout, but it was too late.

"From the side of the Cut came a crash as of a dozen cannon, there was a great swirl of rising smoke, a scattered shower of granite and dirt—and then we saw a jagged rock hurtling through the air directly toward the man below us. Whether he, too, saw it or not, we never knew.

"As straight as from a rifle, the boulder crashed down upon his skull, his bandanna dropped from his nerveless hand, and he sank limply onto the ground, dead. There beside him was the case of
dynamite untouched. The rock had been swerved aside by the human head and had just grazed the box with its deadly contents. Another inch to the right or left, and no power on earth could have averted an explosion which might have claimed dozens of victims!"

For a moment we were silent. Bradley was the next to speak.

"About as near a squeak, that, as an incident I remember," he said, reflectively. "One day I was standing near a blast which happened to be unusually powerful. With the explosion a perfect shower of rocks of all sizes was blown from the earth. Two or three of us were cut by stones, and when we shook ourselves out of the trance and looked around, we saw that the roof of the railroad dynamite station at our side had been smashed in by a great boulder. It had crashed from the rafters to the ground below—and was lying wedged in between three cases of powder, without having exploded any of them! Around it were stacked a thousand pounds of dynamite. A shade more force, another inch or a fraction of an inch difference in its fall, and we would never have known the power that struck us!"

Endicott, over by the window, aroused himself.

"Something like the escape I had," he told
us. "We were sitting around the dinner table, without a thought of anything out of the ordinary happening,—in fact, an unusually quiet meal. Suddenly there was a deafening explosion.

"'A big blast, that!' I said, carelessly, and went on with my eating. The next instant there was a jar above us as of an avalanche and as I pushed back my chair the table before me was buried under a great, muddy boulder! Through the roof was the round, jagged hole where it had entered, and before me was the wreck of the dinner, a vivid indication of the narrow escape I had just experienced. If I had not instinctively ducked, I would have been lying under the splintered table, dead or dying.

"The rock, we found later, had been blown a distance of a quarter of a mile by the blast which had dislodged it from the red clay, where it had probably reposed for centuries."
CHAPTER VIII

A DAY WITH THE PANAMA ALLIGATORS

"HIST!"

Captain Shanton bent forward eagerly in the bow of the boat and darted a quick, sharp glance toward the river bank.

I strained my eyes in the same direction in vain. In the silence of the waving cocoanut palms and tangled underbrush I could make out nothing.

"Back, men, back!"

The Captain's crisp order broke the stillness abruptly. The Indians tugged vigorously at the oars—the boat quivered, and then slowly receded. The next instant Shanton's rifle was at his shoulder.

"Quick, to your right!" he whispered, as I followed the direction of his musket. "There!"

"Why, that's only a dead log!" I cried in disappointment. "Surely you——"

The heavy report of the Captain's gun drowned my words. Again it rang out, and then a strange thing happened.
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The drifting log ahead of us sprang literally out of the water! In that instant, I saw a cruel, yellowish-brown mouth at its end snap savagely open. I had seen my first alligator—at home.

Even as the thought flashed through my mind, I had jerked my Marlin to my shoulder and followed the Captain’s fire. My first bullet struck the water at the side. At my next, the ’gator sank like a stone beneath the yellow waves.

“Good! you winged him that time!” shouted Shanton exultingly. “But we’ll soon find a dozen others to take his place. We’re going into the biggest ’gators’ pool in all Panama in the next half-hour. Here, men, send the boat along. Straight ahead, around the bend there.”

I thrust the eighth load home in my repeater as Shanton paused.

“That’s right,” he nodded; “you’ll need ’em all, and need ’em badly before we’re through. An alligator ’s an ugly customer when your lead strikes him in the wrong spot.”

Of a sudden the boat shot around the bend, and the stream abruptly narrowed. The brush on the banks deepened and the trees in places seemed almost joined together. Even the sunlight seemed less cheery.
A Day with the Panama Alligators

"How many alligators are bagged down here in a year's time?" I asked Shanton, as he finished emptying one of our few remaining cocoanuts.

"Oh, I don't know; several thousand, more or less," he replied carelessly. "I once knew a chap in Colombia, hailing from New England, I believe, who went into the 'gator business on a wholesale scale. During his first season he shipped forty thousand skins to the New York market at one dollar and seventy-five cents per, and the next year he raised the figure to sixty thousand. How's that?"

"You surely don't mean that he shot them all?"

"Well, hardly! He contrived a curious plan of killing the 'gators with a young chicken and a pointed stick. The animal was lured to the bank by means of the fowl, and when it opened its mouth to snatch the bait, the sharpened stick was wedged into its jaws. A stout rope had been knotted about the club, and the other end coiled around a convenient tree. The unfortunate alligator was thus as secure a prisoner as though it were surrounded by an iron cage.

"The New Englander captured so many 'gators by this ingenious method that he was enabled to retire."
CHAPTER IX

SHANTON—TAMER OF PANAMA

SHANTON’S long arms passed the newly opened cocoanut across to me, as the Indian dried his machete blade and cast an expert eye toward the stack of remaining husks in the boat’s stern.

As the sweet milk trickled through my lips, Shanton sank back onto a crooked elbow, stretched his leggin-clad feet out before him with a contented sigh, and puffed solemn smoke-clouds toward the fronds of the palm tree overhead.

We had wormed our way a dozen miles through the Panama jungle after alligators—nor had our search been in vain. Sprawled out on the mud bank of the yellow Picara was the great, clumsy body of a fourteen-foot ’gator with a circle of our Marlin bullets criss-crossed in its hide.

I was watching the black-red blood dripping from its mouth when Shanton removed his pipe to speak of the Man with the Steel Muscles at the White House.
Always he is this to Shanton,—Shanton, who remembers him as he bunked and fasted and fought with him in the old Rough Rider days, and again on the frontier trails of the West when he was not President Roosevelt, but Roosevelt, the sportsman,—every inch of him! This was the picture that Shanton painted in our lounging noon hour in the wilderness,—the picture of a comrade, who beyond the President saw the Man. And the Indians, impatient, dozed and roused themselves, and dozed again as we talked.

When Roosevelt picked his man for peacemaker and peace-preserver at the Panama Canal, he searched the West and fastened on George R. Shanton, cowboy, deputy-marshall, Spanish War captain, prize "bronco-buster," and all-around graduate of the frontier,—that portion of the frontier where a revolver shot is the standard of eloquence. The President wanted a chief of police at Panama fashioned of red blood, not of red tape.

And he found him.

A smile of reminiscence sparkled on Shanton's face and his square chin seemed less square, as he unbosomed himself:

"A man with a big hand appeals to me. Mr. Roosevelt has a big hand, and he knows how to
use it. He brought it down on my back once with a muscle that almost floored me.

"It was on the day of my departure for Panama. I had called on the President and was about to leave, when he raised that great hand and clapped me squarely between the shoulders. I am no small man,"—six feet two inches in his stockings!—"but I felt that blow for an hour afterward."

"'I am sending you down to the Canal, my Colorado bronco-buster,' I heard Mr. Roosevelt say, when I recovered myself, 'to make good,—to make good!'"

Shanton gazed musingly out over the muddy Picara.

"I have tried to do so," he added, with a soldier's simpleness.

In the background of my fancy, I could hear again those crisply cut Roosevelt tones, "I am sending you down to Panama—to make good!"

A trio of monosyllables, three short, curt words, driven home like a nail under a hammer—and they sent a man into the jungle to face death many times and in many guises before he neared the goal to which they pointed. On his shoulders was the greatest burden it is given men to carry—the law; and as his destination he faced that region where in all American territory the lawless held
most brazen sway. At his right and at his left was a wilderness, three fourths of which white man’s foot had never explored. In its heart was a winding string of jungle-settlements, with a population of fifty thousand shirt-sleeved, sun-browned-men—from India and Indiana, New York and New Zealand, St. Louis and St. Petersburg, men who numbered forty nationalities, the best citizens and the worst citizens of all governments.

Panama has been the cesspool into which the human refuse of the globe has been dumped in ship-loads. The giant task of the New World has demanded men and the Old World, whisking a hurried broom through its prison cells, has supplied the Man but kept the Manacles at home.

Men with the clammy fear of the guillotine and the block and the gallows were pitchforked from the land of their birth—to find new victims in the wilds of the Isthmus. Thousands of them—the vomittings of a score of nations—were driven cattle-like into the hopper of the Panama Canal.

And in the smoke of the greatest engineering battle of history, the contagion of the scowling stream of Europe’s cast-off citizens was not appreciated until it had found festering lodgment. When finally the gates of the Isthmus were clanged shut, the peril of the outlaw was locked within
its borders. And the project which it threatened was that which more than any other held the honor of the American nation, and which more than any other a jealous world was watching, hungry for the first sign of failure.

So much for the Men and the Menace which George R. Shanton, late of the Rough Riders, faced with the commission that named him police chief of the five hundred square miles of jungle through which the Panama Canal is to bore its way.

In a sentence summary, the task of Shanton was the taming of the Isthmus. Has he won or failed in its accomplishment? Five years ago, the bandit of Panama was a terror unchecked. The man with a wallet in his belt carried a gun in his pocket. To name the Canal was to name the zone of the greatest lawlessness from Colombia to Canada. What is the situation to-day? We hear much of the historical, mechanical, and political conditions of the Panama Canal. What are the details of law and order that we find at the Isthmus? It is a query which gives us one of the most amazing—and least known—chapters of achievement in the history of the giant waterway. Let me give you its skeleton outline as it was presented to me by the grizzled engineer as we stared into the starless silence of the
Panama night. We had been watching from the veranda of the Hotel Tivoli the winking lights of the city of Panama—yellow rings against the blue darkness—with the spell of this summer evening in midwinter stealing away our adjectives. Like the chill of a cold douche, shattering to fragments our sentiment, came the cynical sentence of the British attaché at the end of our row:

"What a night for crime!"

The engineer at my right brought his tilted chair to the floor with a sharp thud. "You're wrong," he shot back crisply. "The man with the sand-bag is taking the evening off!"

The attaché whistled softly. "I admit I'm new to Panama," he began, "but——"

The engineer brought the flame of his match to his cigar. "Then you don't know Shanton," he finished with a grin. "These are the nights when the Captain's hawk eyes never close—and every bad man from here to Colon knows it as well as he knows the time-table of the Panama Railroad. He would as soon think of going to work on a steam shovel as running into the Shanton vision."

The engineer met my stare with a chuckle. "Four and five years back we had the news of
The Conquest of the Isthmus

a murder served to us for breakfast two or three times a week. To-day the police blotter of the Canal Zone shows as few crimes as any similar extent of territory in the United States!

"More. Put our population at sixty thousand—outside the boundaries of the Panamanian government. Pick any city of sixty thousand in 'the States,' covering less than one fiftieth of our extent, and we will show a record of law and order just as good, and in some cases better. We can go even further. We have fewer saloons and less gambling in the Canal Zone than the average American city of twenty-five thousand!"

A musing moment slipped by in silence. "And this cyclone reformation," I gasped, "what has made it?"

"Shanton!" was the terse reply.

And as the circle of my Isthmus prowlings broadened and deepened, I found the name echoed with a grim persistence. The engineer had not exaggerated. In the forty-nine miles of American territory stretching from the Atlantic to the Pacific, I found only thirty-three saloons. Two years ago there were a hundred and seventy-five.

I searched industriously for the rioting, gambling games of the border and discovered but two,
and these in half-hearted operation. Yet the spirited reminiscences of the veteran engineer at my elbow drew glaring pictures of the roulette and faro dens of three years before with the attending knife-grapples and midnight debauchery. In the six months preceding my visit, there were but three murders in the Canal Zone and not enough burglaries to fill the fingers of one hand. Less than four years ago, within the span of one month fifteen knifed men were found—without the crime-statistics reaching the record mark!

These are naked facts. How have they been brought about? What has been the galvanizing power behind the statistics? To point my answer, let me first give you the story of Shanton and the contested election of ballots—and bullets.

It had been a campaign of unusual warmth even from the Panamanian viewpoint and upon the issue there hung the question of who should rule the sullen city of Panama and ride in the Mayor's carriage. Of course all this was of no concern to Americans, for across the official boundary marking the limits of Panama, Federal authority counts for as little as the King's command on this side of the Canadian border. When, however, the rifles of the less favored faction appeared to offset the votes of their opponents
and Yankee property owners began to cast uneasy eyes toward the Cathedral Square at every unusual noise, Shanton's department of khaki-clad men were given sundry curt words of command and Shanton himself, on his restless horse, "Topsy," galloped toward the polls.

As evening approached, the candidate of the minority became more and more boisterous and the crowd of supporters at his back, hired at so much the hour, surged up and down Avenue Central with ugly threats in their voices if not in their hearts. About this time the whisper reached the frowning Shanton that the Panamanian authorities would not object to a display of Yankee force if exerted in the right place and at the right time. A sudden surge forward of the crowd at his shoulders abruptly determined his plan of action.

Spurring his horse to the middle of the street, his hand swung back to his revolver, and his voice rang crisply out over the scowling faces before him.

"I will give you two minutes," he paused with a grim smile, "in which to disperse! You are well enough acquainted with me to know that I mean what I say!"

Shanton was alone. The nearest American
officer was blocks away and he realized that the
crowd of mulattoes and Spaniards and Panaman-
ians knew it as well as he did. But his frown
was as sternly confident as though a regiment
were chafing at his back.

The line of sun-tanned faces before him hesi-
tated, wavered, then there was a sudden forward
movement from the rear. The next instant there
was an awkward rush toward the frowning man
on the horse.

Shanton's revolver leaped into the air and a
double spurt of flame shot from its muzzle. The
rushing figures slackened their steps and then
there was a low, sneering cry and they darted
forward again. Shanton had fired over there
heads. It was a moment of real crisis. Shanton
still held his revolver poised but he did not press
the trigger.

Touching his horse lightly with his heels, he
backed the animal toward the curb, with his face
and weapon toward the advancing crowd. The
horse reached the walk, crossed it, hesitated
against the window of a bazaar, and then, at a
word from its rider, backed squarely through the
panes. There was the crash of falling glass and
then, as the muttering throng came to an aston-
ished pause, Shanton brought his horse to a halt
half-way through the window. His revolver was raised a deliberate twelve inches.

"I am going to shoot to kill!" he announced grimly. "The man who is standing by the curb thirty seconds from now will feel a bullet in his body!"

The sentence produced its effect before it was finished. It was uttered with the crisp impatience of the man who means action, and his finger was toying with a disagreeable carelessness about a certain flimsy trigger. A dozen of the more exposed figures moved quietly into the background. At that moment there was a burst of lusty American shouts from the end of the block and a squad of mounted policemen spurred toward the leader in the broken window. It was the one point needed to complete the climax. The mob broke into a stampede for safety, and the threatened riot was at an end.

As a tribute to a man’s personality, the incident is perhaps the most significant of the Shanton stories that are told at the Canal. Also as an illustration of one of the central factors in the taming of the Isthmus, it is illuminating. He who can command a regiment is rated a leader of men. He who can command a mob bears to the former the relation of genius to talent. And fifty
THE INTERIOR OF Isthmian Canal Commission Mess-House, Culebra
thousand men in the heart of an untamed jungle are much more likely to partake of the elements of the mob than the regiment, and much more likely to respond to the decisive action which rules the latter and to chafe under the daily routine which disciplines the former.

But it takes genius to realize and emphasize this fact. Shanton has something over two hundred men under his command. They are nominally police but literally as far from the conventional policeman as a Western sheriff is from the "plain clothes" man on the city corner. They have thrown away the police helmets and the police uniforms. They wear khaki and broad Stetson hats. Likewise they have thrown away the policeman's distrust of his neighbors. They are friends with every man at the Canal with whom they can be friends.

Shanton has laid down no ramrod rules. If he had, one thousand men could not police the Canal Zone. He appeals primarily to a man's sense of justice. When this fails—and it does fail often—he appeals to his sense of force. There is a dead-line beyond which the Isthmus knows it is not safe to venture. When Shanton uses his gun, he does so not only with the certainty of a dead shot, but with the ease of a man who
is absolutely fearless. This is why he can handle a mob. This is why the outlaws of the Isthmus know that his hand is swift and deadly and consequently to be avoided.

Yankee justice in Panama is swift and unique. It possesses a trade-mark nowhere else duplicated. Up until a short span of months ago when the conventionalism of shocked jurists interfered, it was—ideal.

Panama above all else is an impatient country. When it does things, it does them in a rapid way. When a president is to be removed, the operation is performed and his successor pitchforked into office within a fortnight—or less. It is a country that doesn’t believe in delay except in matters of daily toil, in which perhaps it is not exceptional. Therefore when to the Panamanian restlessness we add Yankee energy, we can understand that the courts of the Canal Zone have been clogged but little with the litter of red tape.

Up until the fore part of 1908, the American residents of Panama proudly maintained that they had solved the jury problem—and they were right. Then the Northern courts stepped in and ideals were shattered. The Canal Zone had reverted largely to first principles in the selection and operation of its jury, and the first principles
were a little too blunt and perhaps too simple for the black-robed dignitaries of "the States," who seek to regulate the laws of a living generation by the moth-eaten rules of men dead half a century and more.

The Canal Zone instituted a jury of three—and it made sure that the three were men who knew the law and had no qualms about administering it. The trio were not laymen. They were not only acquainted with the dusty law books stacked to their right and left, but had a working knowledge of men. Also they knew the temper of the country and realized that they were there to enforce the law—not to pick flaws in it. They were too busy to wrangle over the interpretation of an adjective, and consequently the public was not bored with a long, useless trial for which the dear people had to pay.

To the opinion of the jury was left all questions from the stealing of a dynamite keg to the exploding of such keg—with malicious intent. If a man picked the pockets of his neighbor or took his life or stole his wife, the same jury passed upon the merits and demerits of the action with equal calm and equal force.

During my Panama visit, I remember that a prisoner was sent to the penitentiary for ten years
within six days after an aggravated highway robbery. Before the week was over, he had begun to serve his sentence! The Americans "at home" would call this "frontier justice" and shrug their shoulders at its "crudeness." In New York, the jury would hardly have been selected within this period—if the prisoner had a few thousands to drop onto the scales of justice.

In a characteristic letter from Shanton not a great while ago—a letter bare of superfluous adjectives, for the man writes as he shoots—I read the story of a thrilling chase through the underbrush of the mountains after a trio of skulking outlaws. It was true that most of the story appeared between the lines, but the affair was as vivid as a moving-picture film, for the crisp sentences of a man of action must themselves bristle with action. The outlaws were of mixed nationalities—apparently the worst features of half a dozen races in their make-up—and they had torn a whirlwind path from Culebra to Colon. In the end, they had pried up the tracks of the Panama Railroad for the playful purpose of watching the next train crash into the palm trees, which action—shorn of disastrous effects barely in time—was the clue which put the irate Shanton hot at their heels.
Shanton—Tamer of Panama

It was a stern chase and a long one. The Pan-
ama mountain range is a broken slice of the
Andes and just as ugly and just as treacherous
as the rest of the scowling chain. There are parts,
in fact many parts, where a white man has never
penetrated—and few brown or red men. It was
toward these sections that the retreating outlaws
were shaping their course.

It was a matter of three rough-and-tumble
days and sleepless nights before the circle of pur-
suers corralled their prey. A storm of spattering
bullets emphasized the beginning of the end.
Desperate men with the certainty of the gallows
at their elbows have small reason to care for
their own lives or those of others. When the final
rush of the Shanton contingent was made, the po-
lice reached their quarry in a literal baptism of
lead. The last stand was an affair of clubbed rifles
and bruised fists. It was a battle as desperate as
any waged by the armor-clanking adventurers of
Balboa on the same trail four centuries in the
past.

When the bandit trio were reduced to the sub-
jection of the Panama "nippers"—curiously
enough no man in either the pursued or the pur-
suers being fatally hurt—Shanton prepared with
the rough-and-ready carelessness of the great
The Conquest of the Isthmus

out-of-doors for the next chapters of the drama.

"I now stand ready," he wrote grimly, "to execute the sentence of the law, of 'death by hanging,' just as soon as I am told to go ahead!"

Wherefore, the shocked jurists of "the States" would again hold up pudgy hands of horror and declaim against the roughness of the border, where a police chief having caught his prisoner proceeds to punish him while his crime is still warm in the public memory! Panama throws aside the technicalities of dead law-makers in dealing with living law-breakers. It believes in punishing a crime before the crime has been forgotten, that men who may contemplate a similar offence may know what to expect.

It was not till I stood in the heart of the Culebra Cut, where in all the windings of the Isthmus man and Nature are locked in their most desperate grapple, that I found the motive power of the canal—the army of toil behind the steam shovels and the dirt trains and the air drillers. In the thunder of the engines three thousand men in twisting, squirming rows—from the cliffs, snake-like coils of ants—were burrowing deep down into the red and yellow clay, now with their bent backs alone visible like the angle of a half-closed
THE OFFICES OF THE DIVISION ENGINEER AT CRISTOBAL
jack-knife, and again their faces bobbing up into the sun, grim and grimy and dripping wet with perspiration. As far as the eye could sweep the ant-men wound their serpent coils until they were swallowed by the bend of the scowling cliffs—rising and sinking, rising and sinking like the wash of a troubled sea.

And again, beyond the range of vision, they crept on even as the bead of flame creeps down the fuse, until the task-drivers, with the great blue-prints and circling compasses and strange rows of figures, brought them to the surf of the Pacific. And again, over through the lazy, nodding palm trees at the side, they thrust restless, clawing arms into the long, green stretches of the jungle, carrying two steel rails through the narrow path the machete chopped. Over these rails, rumbling, swaying rows of cars were to come, bearing the red and yellow clay and the great, jagged rocks torn up by the ant-men as their burrowings grew deeper and longer and nearer the two oceans they are to unite.

Blistered by the rays of the copper sun, smothered by the disease vapors of the jungle, bruised and battered and broken by the lash of toil, it is an army clamoring always for men, more men, with which to repair its torn ranks and fill
its gaping holes and reinforce its assaults on the red and yellow clay. Nor can it look beyond the sound limbs of its recruits. So that it assimilates men rough both as to hands and morals—and rougher in the wilderness with home a matter of thousands of miles beyond the palm trees. This is the Army of Brawn and Muscle, criss-crossed on the edge of Nowhere, that is digging the Panama Canal. To attempt to discipline this army by the starched laws of the well-groomed, well-mannered city of “the States” would be to attempt the impossible. He who would control such a body successfully must know men—in the raw, stripped of the veneer of polite society.

It is not in the day’s work of the Canal that the police problems bristle. When men are driving their physical energies at top-notch speed, they have small opportunity for either restlessness or lawlessness. It is in the reaction following the daily toil that the germ of discontent is bred and men plunge into hilarious, ribald amusement.

It was not in the mines of “Forty-Nine” that the reckless crimes of the frontier were developed; it was in the saloon and the gambling den next door to the mines—where the men went when the day’s work was over. This truth of human
nature was early recognized in the law and order campaign of the Panama Canal.

The day of the Isthmus toiler was filled. The problem remaining was to fill his evening. And in the heart of an untamed jungle, both the possibilities and the encouragements of the subject were limited. On the one hand, Shanton faced the maudlin sway of faro and cheap whiskey. On the other, he confronted the chafing monotony of a border evening, lacking theatres, libraries, and even the gossip of society. It was the choice of a man's sullen thoughts and solitude—or the roulette wheel and forgetfulness. And in the spell of forgetfulness, men even forgot the law and the revelry of the Canal became proverbial.

Then the Young Men's Christian Association came to the Isthmus and the harassed chief of the worn-out police force joined eager hands with the secretary and turned his policing over to the alert man with the bowling alleys and the basket balls and the Indian clubs. Also Uncle Sam turned a kindly eye toward the new arrival—and realizing that a man's working efficiency depends on how he rests and how he plays, gave from his own pocket the funds for the construction of the four Y. M. C. A. club-houses which presently dotted the Canal Zone from Colon to Panama.
The Conquest of the Isthmus

Being men who had dealt much with men, the Y. M. C. A. secretaries also shattered the starched traditions of home, and gave the gymnasium over occasionally to dancing clubs, and turned the reception hall over to the pool players, and sold cigars and soda-water at all decent hours, and established a free circulating library with books of real human interest. Moreover they invited in the wives—and defied the saloons to get their men away from them.

And Shanton, seeing how the current of events was wending, leaned back and rubbed well satisfied hands, for in one year the saloons and the crime of the Canal were decreased by thirty-three per cent. When the baseball league was organized the next year, the percentage was pushed to a still higher notch. Now they are doubling the number of the Y. M. C. A. buildings and the gamblers are leaving for Colombia or Jamaica. Shanton's policemen are nearly all Y. M. C. A. men and Shanton himself ranks the power of the organization even above the power of a revolver—which is high place in his esteem.

The problem of the Canal worker's evening has been solved, and the man's physical and moral well-being and the public peace of the community have bounded forward as from a Gatling gun.
Shanton—Tamer of Panama

The American and Panamanian police do not dovetail. Neither, however, do they conflict. Perhaps this is because a clash would be fatal to the Canal. Yet in no detail are the two extremes of the Isthmian civilization more sharply underscored.

To put it bluntly, the police force of Panama is a relic of the underground dungeons of the Inquisition. The republic of Panama does not permit capital punishment. The statutes of our tea-cup neighbor have eliminated the barbarity of the death penalty with one indignant sweep. But when the judge goes out of one door with the law, the executioner enters by another—without the law.

Suppose we follow the fate of a certain political prisoner, whose crime seems to have been a too great ambition.

Closely surrounded by from six to eight guards—policemen are as plentiful as water in Panama—the prisoner is escorted to the frowning gates of the national penitentiary, overlooking the great blue waves of the Pacific. In due course he is given a cell, but no doubt is too much engrossed in his own reflections to notice the significant shrugs of the shoulders among the attending guards as the door clangs behind him. One man
indeed hastily crosses himself and the majority of the group seem to remember suddenly pressing duties elsewhere. The prisoner has arrived in the late afternoon. If he examines his cell before the swift tropical twilight comes, he finds that the roof is in an extremely indifferent state of repair. In fact, it is sagging at such an angle that even to his careless eye it looks as though it might fall at any moment. The prisoner may rattle the bars of his cage and bring a scowling attendant to the scene.

"Ah, that is all right, Señor!" the guard grins. "Perhaps in the morning we will move you, eh?"

They did—as a corpse. In the night the roof fell, the debris crushing out the life of the helpless prisoner as surely as though he had been swung through the trap of a gallows.

An accident? Such is the official version of the affair and if the one Spanish newspaper makes mention of the incident it is to reduce it to a half-dozen lines.

Ask any of the American veterans of the Isthmus, however, for the truth and he will reply with scraps of the "secret history" of the Panama penitentiary that outrival even the morbid brain of Edgar Allan Poe. The cell with the sagging
roof is so often occupied that its tragedy passes as an incident.

They do not have capital punishment in Panama. It would be embarrassing perhaps to station certain inconvenient prisoners before a public firing squad. The underground cell is more convenient.

They also have jail deliveries at the Panama penitentiary. Often eight and ten prisoners have been known to escape in a group. At once, a pursuing band of soldiers with restless rifles is on their trail. Those soldiers invariably do their work well and promptly. They never bring a prisoner back, and a prisoner never escapes. Always the official report of the affair is the same. The convicts showed resistance and, as was right and proper, they were shot. Panama goes its cynical way undisturbed and the affair is forgotten, for the official memory of unpleasant events in our sister republic is proverbially short.

Return to the veteran engineer, however, who has lived long enough in Panama to see below the surface and he will begin to check on his fingers the list of such "escapes" that he remembers in the past five years. And, as the engineer continues, the number progresses at a rate that is startling. Always there is one central feature in common. The prisoners who escaped were the prisoners
that "the State" wanted to escape, undesirables whose elimination was, er,—advisable!

With a system such as this at his elbow, an unexplored jungle to his right and left, and in its heart the offspring of forty nationalities, the police problem of Shanton is unique in the crime annals of the world.

In his keeping are the safety of his country's gold, his country's subjects, and his country's honor. To their protection he is giving the best that is in him and always with the willingness, when all else fails, to add his life if needs be.

He has made good. What these words mean to the American people, no man can say until the Panama Canal is a reality.  

1 Since this chapter was written Captain George R. Shanton has been promoted to the command of the Porto Rican Police Department, with the rank of colonel. His service at Panama covered a period of four years and six months.
CHAPTER X

THE DISEASE BATTLE OF THE Isthmus

Four hundred and fifty-two pounds of quinine were consumed by the residents of the Canal Zone during the month of May, 1906. In other words, in the thirty-one days 1,575,000 two-grain capsules were distributed by the American dispensaries. Over 100,000 grains of quinine were needed every twenty-four hours to protect the health of the Isthmus!

To-day, one ninth of this amount is sufficient,—and the death-rate has been cut squarely in two. During 1906, the average percentage of mortality among the white residents of Panama was that of 20 persons to the 1000. In 1909, it will not exceed the ratio of 10 to the 1000.

By these two extremes is the progress of the disease-battle of the jungle to be gauged. Quinine is a big word at Panama—from the moment our steamer docked at Colon we found it emphasized—but it alone has not won the victory.
The sanitary department of the Canal Zone is maintained at an average monthly expense of $100,000. It is costing Uncle Sam $1,200,000 a year to wage the battle with the disease germs of the jungle.

A force of 1,500 men is given constant employment—laborious employment often—in the completion of the mass of daily detail work which the campaign embraces. The taming of the Panamanian wilderness has meant its disinfecting as well. It was not enough to exterminate germs of fever and malaria within a man. It was necessary also to exterminate those outside of him before they reached their victim.

A man can endure hardship, privation, hunger, he can win against the odds of Nature, he can defeat the wiles of his fellows,—but the man has not yet lived who can throttle the deadly stupor of a tropical fever. While the canal-builders of Panama have been battling against the obstacles of mountain and jungle, the health-builders have been battling against a more insidious foe,—the circle of diseases bred over night in the devil's own caldron of the wilderness.

Twentieth-century sanitation has scored such a triumph at Panama that for two years not one case of yellow fever has been recorded on the Isth-
The Disease Battle of the Isthmus

Indeed the disease battle so far eclipses any previous feat of this character that it must be awarded a distinctive place in history.

In Colon, the Atlantic port of the Republic of Panama, the number of dead persons is greater than the census of the living. There are more corpses in the cemetery, buried from five to fifty years, than the entire population of the city,—estimated at 14,000.

It is statistics like these that show the full extent of the tropical disease ravages which the American sanitary engineer has faced—and conquered.

The operations of the health experts of the Isthmus include several divergent and yet dovetailing features. The trail of the disease is not always followed to its victims—it is often followed away from them, from effect to cause as it were. In this connection, the features of quarantine and public and private sanitation are of course prominent, but apart from these details the health department frequently sends a detachment of inspectors miles from the beaten track of men,—to localities where perhaps the foot of native or foreigner has not trod for weeks,—there to seek the primary origin of the death-dealing fever or malaria.
The Conquest of the Isthmus

It is in this connection that the mosquito appears,—the mosquito which up to the present has claimed more victims each year in the Republic of Panama, alone, than the 6400 death roll of the Spanish-American War!

In the Canal Zone are fifty known varieties of mosquitoes, and at least ten classes which have not been definitely named! The greater portion are harmless, but there are at least three varieties whose bites carry the most dangerous infection,—which in from one to two weeks may easily bring the victim to his death-bed.

In the technical language of the sanitary department, these are distinguished under the heads of "anopheles" and "stegomyia"—the former bearing in their bites the germs of quick-eating malaria, the latter plunging their victims into the throes of yellow fever.

In 1908, thirty-two hundred barrels of oil were used in the mosquito war,—a total of 160,000 gallons. The sanitary department takes the position that every mosquito should be exterminated in the interest of the general health, whether "productive of disease or only profanity," and a wholesale death decree has been issued,—and carried out.

The principal method of execution is the thin,
CATHEDRAL PLAZA, PANAMA
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greasy scum of oil spread over the surface of the water, where the breeding-place of the insects has been located. The coating is so light that a small breeze will often sweep it over to the sides of the pool, leaving a comparatively cleared space from which it would seem the mosquito could easily make its escape, without touching its wings to the dangerous fluid. As a matter of fact, however, it is not the amount of oil which the insect receives on its body that renders it harmless. The oil must be absorbed internally and not externally to make it effective.

Contrary to the general belief, a large quantity of water is necessary for the breeding of the average mosquito. A marsh or swamp with comparatively little moisture repels rather than attracts the pest. Tall grass, weeds, or brush rarely serve as a lurking-place for the insect. If there is no body of water in the neighborhood, in ninety-nine cases out of a hundred, there will be no mosquitoes. And in many instances even foul water will be carefully avoided by the female seeking a suitable breeding locality.

Mosquitoes are propagated through the medium of eggs. An expert can tell at a glance the species of insect through the shape of the eggs, the manner
The Conquest of the Isthmus

in which they are distributed, and often through the number.

In some instances, hundred of eggs are laid, and then glued firmly together with a thin, paste-like substance so that they can float on the water’s surface. In other cases the eggs are deposited singly, while still other species, it is known, surround their eggs with a gelatinous matter after the fashion of a frog.

It is a peculiar fact that the egg is invariably placed in the water point downward, so that the young ones will descend to the bottom and not rise to the top,—where the tropical sun would mean almost instant death.

Under favorable conditions, the eggs may be relied upon to hatch the larvæ in from twelve hours to six days. Translated into plain English, these are the “wrigglers,” as the layman knows them, which are found in the rain barrel or open cistern.

The larvæ must rise to the surface for fresh air at intervals of not over two minutes. If forced to remain under longer, strangulation will follow. Here is where the deadly work of the sanitary inspector is accomplished, with the oil-can.

During the twelve days which form the usual life of the larvæ, five sixths of the period is devoted to eating and breathing, and the re-
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mainder—the last two days—to the purpose of breathing only.

The larva performs the functions of eating and breathing at opposite ends of its tiny, wiggling body. The breathing tube projects from the back, and not the front, its angle depending on the species to which the mosquito belongs. The tube of the anopheles, the malaria-infected mosquito, projects outward at right angles and is so short that the insect is forced to lie in a horizontal position when breathing. At its extremity is a minute valve, which remains shut while the larva is under water, but which flies open at will.

With a twist of its thin, hair-like tail, the insect squirms its way to the surface, thrusts its breathing tube above the water, opens the end valve, and inhales the fresh air around it. When the water is covered with the scum of oil, death and not life is drawn into its body. As the thick, greasy oil is absorbed by the gasping insect, the fluid burns its way through the breathing tube like molten lead.

The breeze invariably clears a portion of the surface, it is true, but as the larva is forced to rise every two minutes both day and night, it brushes against the fiery death 720 times every twenty-four hours!
Cruel, heartless, this method of extermination? It is either the life of the mosquito or the life of the man!

Both with oil and quinine the menace of the mosquito is being fought. Quinine, one of the most beneficial drugs to man that has ever been discovered, is absolutely fatal to the mosquito, and this fact is made known to the tourist even before he sets foot on Panamanian shores. Neatly printed handbills, bearing the signature of Colonel W. C. Gorgas, chief of the sanitary department, are distributed on the steamer deck, and prepare the visitor for the early morning diet of quinine, which he comes to expect with the same regularity as his eggs or breakfast food.

With the subjection of the mosquito, the sanitary department has coupled the extermination of the fly. Although yellow fever has been smothered, typhoid is alarmingly prevalent at the Isthmus, and experts unite in the theory that much of it is spread through the medium of the apparently innocent fly. In no portion of the world to-day is so vigorous a crusade being made against the evil of the house-fly.

The fever is communicated through a needle-like plant, under the scientific name of "typhoid bacillus"—detected only through a microscope—
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which clings to the thread-like legs of the swarms of flies, hovering around a garbage or refuse heap. In the path of the insects through the house, and often over the food on the table, the unnoticed bacilli are left behind,—almost invisible particles of deadly poison.

As a first step in the battle with the flies, a complete system of garbage disposal has been organized, supplemented by a thorough inspection of every dwelling on the Isthmus, whether under American jurisdiction or in the limits of the Republic of Panama.

At the present time, 3800 cans of garbage are being removed daily, the refuse dumped into furnaces especially constructed for this purpose,—the system in the heart of the wilderness more perfect than that which prevails in the average American city!

Garbage furnaces are now in operation at the settlements of Gatun, Tabernilla and Empire, and others are being constructed at Culebra and Gorgona, with even more in prospect.

Here is an extract from the September report of the sanitary department for 1907, which shows another vivid result of the house-to-house canvass of the Isthmus:—
Thirty-one houses were condemned as being unfit to occupy in their present state, but which could be made habitable by repairs. The majority of these houses were flat upon the ground and in many cases earth was used for a floor. These dwellings all had condemnation notices placed on them and a reasonable time given in which either to vacate or make the necessary repairs. Only one house was demolished, and this with the consent of the owner.

It may be remarked in passing, however, that, whether the consent of the owner had been given or not, the result would have been the same. By a special concession of the Panamanian government, the American sanitary department is supreme in both the cities of Panama and Colon, although in other respects Federal jurisdiction is not recognized.

The typhoid danger in a polluted water supply has furnished the health department of the Isthmus with one of its greatest problems, which has also resulted in one of its greatest victories. Where as in the past Panama has quenched its thirst from stagnant, scum-covered pools and streams, American ingenuity, under the direction of the sanitary force, has now completed the construction of two giant reservoirs. From the first of these at Rio Grande, the city of Panama consumes
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a monthly average of 52,353,000 gallons, and from the second at Mount Hope, Colon and the adjacent territory use an additional 607,298 gallons—water whose purity has passed the most severe chemical test, and whose part in the disease battle of the Isthmus can scarcely be overestimated.

In January, 1907, 1813 cases of malaria from 31,851 men were treated by the two American hospitals of Panama at Ancon and Colon. In January, 1908, 642 cases were registered from 43,851 men; that is, with a force of 12,000 more men, only about one third the number of malaria cases were recorded.

For January, 1907, in every thousand American employes, there was a sick list of twenty-six daily. For January, 1908, the number had decreased to nineteen daily.

Occupying Commission quarters are 6300 American men, women, and children. Among these there was only one death during the month of December, 1908, which would give an annual rate of a little less than two per 1000!

Pneumonia is rated as a leading cold weather illness. Yet, with a temperature of 118 degrees, it causes more deaths than any other disease on the Isthmus. During an average month, it will
produce twenty fatalities, and strangely enough not more than one of these as a rule is recorded among the white population!

The bulk of the mortality is confined to the negroes, and results from their persistent habit of sleeping in their clothes after a perspiring day's work,—at least that portion who do not secure a shelter and meals from the cocoanut tree, spending the night under its branches and shaking their breakfast from its limbs the next morning!
CHAPTER XI

ROOSEVELT AT PANAMA

It was Shanton who cried, with the soldier's enthusiasm for the leader who has dared and won—and won his heart with the victory—

"This is Roosevelt's Canal. We are digging it for him!"

There you have it,—the real dynamite which is blasting through the jungle and mountain. Not the deadly black powder—one thousand tons of which goes up in smoke at Panama every six months—but the spirit of that man, with the big hand and the big brain and the big personality, twenty-five hundred miles away.

You can't escape it. It dominates the Canal Zone as completely as the contempt for the French or the antipathy to the mosquito.

Mr. Roosevelt has been more than President of the United States—down at Panama. He is the popular idol.

The men at the Canal are scoffing at the puzzled
gropings in the maze of the Roosevelt future. They have definitely settled the problem as to what to do with the President.

Shanton glanced up from the inspection of his rifle with a stare at the probing query I framed. "Now that Mr. Roosevelt is through with the White House and the Canal,—what?"

"Eh?" He bit the word half through.

I shied a stick at the reconnoitring head of a green lizard in the bushes, as I repeated the question.

Shanton studied the query and the band of his big Stetson hat a full moment before he essayed an answer. He was twirling the hat slowly about his fingers as he fashioned his words, removing his pipe the better to give emphasis:

"I don’t see any question there. Mr. Roosevelt is not going to get through with the Canal!"

The silence of the jungle fell again and he raised himself to his feet before he continued:

"The President can’t leave the Canal now, man! He can’t leave us down here, with the work half done. He has given us all our enthusiasm and interest in the job. He kept us at it in the old days when the fever was gnawing us and the newspapers at home were picking us to pieces. And he’s keeping us on the job now, when the
men who have done the things that count are being offered bigger money and the chances of their lives to quit. Some of us have left, but"—Shanton ran the barrel of his Marlin softly through his hands—"more of us have stayed, because it was Roosevelt who was bossing the job!"

Shanton leaned his rifle against a palm tree, slowly doubled his right fist, and brought it down into his left palm with a smack that caused a dozing Indian to roll over into the mud.

"This Canal is the biggest contract of brains and muscle and money that has ever been rammed down the world’s throat! Do you mean to say that the President, who has been the man behind it from the first, can leave it before it is finished?"

I slipped a quiet sentence into the argument.

"Do you forget the end of his term?"

Shanton glared.

"Panama needs Roosevelt,—whether he is in the White House or out of it. And Panama is going to have him,—as President if we can, but as boss, whether or no!"

Secretary Joseph Bucklin Bishop of the Canal Commission—and personal representative of the President at Panama—leaned back in his swivel chair in his cool, inviting office at the Hotel Tivoli at Ancon, pressed his hands together, tip to tip,
and scrutinized the ceiling, as he pondered my query as to Roosevelt at the Canal, in the present,—and future.

"It would be no exaggeration to say that the President regards the Panama Canal as the greatest single feature of his administration," said Mr. Bishop as his eyes descended from the ceiling to mine. "Apart from the public interest in the project, I think that Mr. Roosevelt feels the keenest personal interest of his career in its success.

"It is just such a campaign against odds—the odds of nature—that would most appeal to him. It was the battle of the great out-of-doors with which he rubbed elbows when he was down here a year and a half ago, and he sniffed its spirit and plunged into its thick like a veteran war-horse.

"From the steam-shovel gangs upward, it was the men of the strenuous life that he met, who knew him and admired him because of his own strenuous life. We call them 'T. T.'s' down here, 'Tropical Tramps,' because they have dared death from one end of the tropics to the other. Mr. Roosevelt is an ideal after their own hearts,—their tanned cheeks and steel muscles and frank, straight eyes caught him from the start. I don't believe that the Roosevelt smile once left his
THE QUARTERS FOR THE MARRIED AT PARAISSO
Roosevelt at Panama

face from the moment he stepped off the train at Panama until the gang-plank of his steamer was raised at Colon.

"The President sent me on two weeks ahead for photographs to illustrate his special message.

"'I want pictures of everything and every place I am to see,' he told me, 'pictures that will show something, and mean something.'

"I began my mission with enthusiasm, and in my eagerness scoffed at the Panamanian custom of a two hours' siesta in the heat of the day as a waste of valuable time.

"'Pack up some sandwiches,' I directed my guide, 'and we need not stop for luncheon.'

"At the end of the second day, I was in a complete collapse. With this experience in mind, I tried to slip a timely caution to the President when he arrived.

"But he laughed away the warning, squared back his shoulders, and worked fifteen hours a day during his visit! Seasoned residents were dazed. Even the hardiest of the old-timers digested his activities as something uncanny. Mr. Roosevelt is the only man I know who has dared and conquered the Panamanian climate!"

Mr. Bishop drew a deep breath and a box
of cigars, with a high-sounding label, toward him. He offered me a selection, with comments.

"The best brand of Havana make,—for this country," he explained, as he tapped one of the fat brown rolls with his forefinger. "Take these to the States and they would lose their flavor at once, even if they did n't lose their cost-tag. Bring American tobacco down here, and the same rule applies vice versa. I once carried a box of cigars from New York as a present to Governor Magoon of Cuba, and invested therein about three times the sum I expend for my tobacco. When the Governor opened the box, and we sat down for a smoke, I was wearing a smile of the pleasantest anticipation. Mr. Magoon lighted his cigar, puffed slowly for a moment or so, and then he turned it around with a puzzled frown, and began again. I followed his example, and was examining my cigar with the same bewilderment, when we both glanced up and our eyes met.

"Say, Bishop," said the Governor delicately, "where did you get these —— things?"

"That was the reception which the finest New York tobacco met—in the tropics. Tobacco, unlike the prophet, is best appreciated at home!"

Under the stimulant of his cigar, Mr. Bishop gracefully tacked back to the point of discussion.
"The President is constantly surprising me by his knowledge of the minor details of the Canal which even the men on the job would have to refer to the file cases to answer. He has at his fingers' tips the scale of wages for every department on the Isthmus, the amount of supplies which the commissary should use in a month or a week, and the effect the weather should have on the record of the average steam-shovel or blasting gang.

"The men down here even say that the President would discharge by cable the person who interfered with the progress of a dirt train!"

Mr. Bishop pushed across to me the copies of two cablegrams which were to form the basis of a story. I give the cablegrams first—

"CULEBRA, Sept. 4, 1907.

"President Roosevelt,

"Oyster Bay, New York.

"August excavation from the Canal prism, by steam shovels and dredges, 1,274,404 cubic yards. By steam shovels, 916,950 cubic yards, as follows: Culebra, 786,866 cubic yards; Gatun, 105,223 cubic yards; Mindi, Chagres, La Boca, aggregate, 24,861 cubic yards. By dredging, 357,454 cubic yards, as follows: Colon division, 189,170 cubic yards; La Boca division, 168,284 cubic yards.

"This exceeds all previous United States records."
Highest preceding total for the Canal prism was 1,058,-
776 cubic yards for July. Rainfall, 11.89 inches.
(Signed) "GOETHALS."

"OYSTER BAY, N. Y., Sept. 5.

"GOETHALS,
" Culebra.

"I heartily congratulate you and all the men on
the Canal for extraordinary showing you have made
during the month of August. As this is the height of
the rainy season, I had not for a moment supposed
that you would be able to keep up your already big
record of work done, and I am as surprised as I am
pleased that you should have surpassed it.
(Signed) "THEODORE ROOSEVELT."

"The President's message was read aloud to a
blasting gang at Culebra," supplemented Secre-
tary Bishop, "one of those aggregations of varied
nationalities, which include the men of the 'Seven
Seas' and the countries beyond.

"There was one man in the number—a moun-
tain of bone and muscle—who received the English
language much as sand trickles through a sieve.
He asked that the cablegram be reread, listening
the while with bent head. Suddenly, he looked
up with a great smile flooding his face, as he burst
out,—
"'Well, if it's ze cubic that he wants, then we will give him ze cubic!'"

Mr. Bishop drove home his point with the one sentence,

"Such is the spirit of Roosevelt at Panama!"

"And the elimination of the third term?"

I ventured. "What will be its effect at the Isthmus?"

"It need not have any!" was the grave reply.

"The American people need Roosevelt at the White House; also, they need him at Panama. It is not alone because he is President that he has made a success of the Canal. It is because he is Roosevelt! And he will be the same Roosevelt in public or private life.

"With all of the men who have come and gone at Panama, the President has been always the central figure. He has begun the Canal,—has brought it through the crisis of its early obstacles. Why should he not complete it?"

"As a resident of Panama or Washington?"

I queried.

"Either or both," was the prompt rejoinder.

"The place of his residence would be a minor feature.

"And,—Panama is no longer the edge of nowhere. It has come to be the centre of a good,
big somewhere. The man who comes down here is not leaving for a camping-out expedition!"

In cold-blooded figures, as separated from the hot-blooded eulogies of admirers, just how is the Roosevelt spirit at Panama to be reckoned? What manner of foundation do statistics build for this cyclone-tribute to the President, which is sweeping the neck of the Continent? *What has Roosevelt done at the Canal? Not what men say he has done.*

For answer, I am going to burrow into the records of the engineer and shake the dust of the file case from the most startling array of figures ever pigeon-holed in the history of the Panama Canal.

Grouped together, they form the magic story of the steam shovel—the giant machine which is crunching through mountains and under boulders, whose iron teeth are tearing and rending and crushing their wizard-path from ocean to ocean—the machine which is nothing but a great, ungainly, useless mass of rusty metal without the spirit of the pigmy Man behind it.

It is the steam shovel which has made the Panama Canal possible; it is the men of the
steam shovel who are giving mechanical experts to-day the greatest puzzle of the Isthmus.

In 1906, the maximum capacity of the steam shovel—and this reached apparently by the most vigorous efforts possible—was measured at 363 cubic yards per working day. In 1909, the same shovel and the same workmen, confronted by the same conditions, are increasing this record to 1000 cubic yards. How?

Two years ago the maximum canal excavation for the month was placed at 1,000,000 cubic yards. To-day, this output has been trebled, so that a record of 3,000,000 cubic yards has been reached on two occasions during the summer of 1908. What is the secret of this amazing stride?

The steam shovel does not have more or better improvements, the obstacles to be confronted are just as numerous and just as stubborn, the ground is just as unyielding and just as rocky. What then is the reason?

Experts, failing to find explanation in the machinery or the soil, have fallen back by process of elimination to the workmen. And at once light floods the problem and throws into a clear-cut relief a fourth feature.

Against the wall of the Panama jungle, the
The Conquest of the Isthmus

investigator sees the bold, forceful name of Roosevelt. The men on the Isthmus to accomplish a record, that has brought the engineering world into the sharpest attention, have been animated by what,—whom?

The student's eye and pencil pause at those Canal statistics which were returned in the latter part of 1906. Opposite them in Panamanian history is the visit to the Isthmus with which President Roosevelt electrified the American people. From that date, the astonishing increase in the Canal excavation began to assert itself. Records which had been deemed of top-notch rank previous to the President's visit were smashed like egg-shells a few months afterward!

A man had come to Panama, and mingled among the men of the Isthmus for a span of hours, and it was as though a monster electric battery had galvanized the life of the jungle.

Call it what you will, define it as you will, this is the Roosevelt spirit at the Canal,—mystifying, magnifying.

The sledge-hammer testimony of these sharp-spiked figures of Panama, which proves even while it does not explain the point, I submit to you verbatim:
### Roosevelt at Panama

**THE STORY OF THE STEAM SHOVEL**

**CENTRAL DIVISION**

**CULEBRA CUT**

<table>
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<th>Period</th>
<th>Average number of steam shovels in work</th>
<th>Number of working days</th>
<th>Output per shovel per day, cubic yards</th>
<th>Output per month, cubic yards</th>
<th>Rainfall, in inches</th>
<th>Maximum temperature in sun at Bocas del Toro, (°Fahrenheit)</th>
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The Conquest of the Isthmus

TOTAL EXCAVATION, CENTRAL DIVISION (CULEBRA CUT)

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Total to September 1, 1908—22,434,717 cubic yards.

FRENCH AND AMERICAN RECORDS

Highest elevation on new centre line of Canal before excavation began by the French:

At Culebra.......................... 312 feet.
At Bas Obispo........................ 233 "

Greatest depth of excavation by the French:

On I. C. C. axis—At Culebra.......... 161 "
At Bas Obispo......................... 148 "

Greatest centre-line depth remaining to be excavated when Americans took control in order to reach the bottom of an 85-foot level canal:

At Culebra—at same point as before ... 111 "
At barrier on Contractor’s Hill, about... 140 "
At Bas Obispo.......................... 45 "

Total excavation by the French at all points and including diversion channel, about........... 81,548,000

Amount excavated under American control to September 1, 1908:

In Culebra Cut........................ 22,548,000
By steam shovels................. 29,872,308
By dredges.......................... 17,475,123

Total by steam shovels and dredges, entire Canal—47,347,431
Peters, the chauffeur, halted Colonel Goethals's railroad motor car in the swirling smoke clouds of the Culebra Cut, and I clambered into the dirt train, under a vomiting steam shovel.

The shirtless man, guiding the dipper, nodded across at me, and a moment later, as a lull came in the plunges of the great iron scoop, found voice to speak.

The President's visit opened the chat like a grain of corn popping.

"Over there," said my friend of the steam shovel, pointing indefinitely across toward Gold Hill, "a section gang had been getting ready for days to welcome Mr. Roosevelt. Not one of the men could speak English, but they had persuaded some one to paint a rough canvas sign for them.

"When the President's special car steamed through the Cut, the sign was suspended squarely before his eyes, with the inscription,

"We will help you!"

"It was a rude sprawling sentence, done by a rough charcoal artist on a dirty, greasy background, but I believe that the President shook hands with every man in that gang!"

Shanton tells me that Mr. Roosevelt has one engagement ahead of him down at Panama, which
he is bound to fill. His eyes twinkle as he describes it in this wise:

"The President has hunted from one end of the country to the other, but he has never yet gone after a Panama 'gator. And we whetted his appetite for the sport during his visit, until he insisted on our taking him for a half-day's shooting down the Pacific Coast.

"He even planned to go on board the government scow the night before and sleep, so that we could get an early start, but at the last moment his work accumulated, so that we had to give up the excursion. The President was the most disappointed man of the party.

"Never mind, I'm coming back after those 'gators, Shanton!" he said as he left.

"And he will, too!" Shanton finished, confidently.