

The Gravitation Nullifier

Ned Cawthorne, Millionaire, "Floats" a New Issue, but Not of Bonds

By George Frederic Stratton

THE gigantic mogul, No. 73, had been held on a siding on the Santa Fe Railroad waiting for three troop trains to pass on their rush to the Rio Grande. Behind her were 40 empties which she was hauling back to be re-loaded with munitions and supplies and again to be rushed to the front.

Blakely, the engineer, who had been 19 hours on the run and saw no relief until he reached Los Lunas, was doggedly morose, for his orders were coming from

him and wafted him along as though he was thistle down. Fifty yards away he drifted against the telegraph wires and clung to them convulsively. Grouped between him and the engine were the train crew and station helpers, staring in bewildered terror, and a few yards behind them stood a man, dressed in gray, waving what looked like a pocket searchlight, in signals to a biplane, far overhead.

A cavalry lieutenant with a squad of troops galloped round the station and

But he found nothing wrong. The rails were dry and in perfect condition; and with a lowering puzzled look he climbed back into the cab, threw over the reversing lever and opened the throttle. There was not the slightest impulse backward or forward.

The sharp exhaust cut out the explosion of picturesque idiom and expletive from Blakely. Then he yelled to the conductor who had come forward: "Cut her loose, Hank!"



“. . . Thousands of Men Were Wriggling in the Air, Mixed Up with Machine Guns, Mortars and Small Arms.”

dapper second lieutenants or curt, brusque majors, instead of through smiling station agents with their crisp telegrams. At last he got his signal and viciously pulled his throttle. There was a furious rush and whirl of the 12-coupled drivers but no headway.

He instinctively shut off steam, turned on the sand and again slowly and cautiously opened the throttle with the same result—a whirl of the drivers as if they were the wheels of a child's wagon, spinning in the air.

"Grease?" grunted the fireman.

"There'll be a grease-spot if I catch any blamed fools playin' tricks 'round here!" howled Blakely as he sprang from the cab.

The mogul was uncoupled and again the engineer gave her steam and his puzzle became a miracle. The great locomotive started forward with a plunge which threw the fireman back on the coal; the forward trucks sprang clear of the rails and a sharp gust of wind sweeping down the arroya lifted the huge machine into the air and floated it across the main track. Then it settled down in the sagebrush so gently as not to displace one chunk of coal.

Blakely slumped back on his seat, aghast, and the tan on his corrugated cheeks and forehead faded off to a sickly ashen gray. The fireman sprang from the cab, his hair standing on end, but instead of his feet reaching the ground the breeze caught

down the track, halting as they reached the man in gray.

"What does this mean, sir? What aeroplane is that, and why are you signaling? Who are you?"

"My name is Cawthorne," smiled the other. "I'm interested in a new device for suspending gravitation, and that biplane is operating it." He turned to the fireman in the wires and shouted: "Drop off at the first lull of the wind. You'll settle down, all right."

The lieutenant spurred close to him. "I suppose you know that the road is under martial law and that you're interfering with its operation. You're under arrest, sir!"

"Certainly," grinned Cawthorne. "Now, perhaps you'll allow me to put that locomotive again into commission."

He stepped over to the great engine, followed by the officer and his squad, and placing one hand under the cowcatcher lifted the entire front of the locomotive clear of the sagebrush.

"Gravity entirely gone!" he laughed. "Call on two or three of those men to help and we'll put this back on the track in a moment. Then we'll restore its weight and it can go ahead."

The officer scowled and hesitated. Then he ordered four troopers to dismount and help. Two minutes later they had carried it over to the head of the train. As they did so, Cawthorne again signaled the biplane. Then he stepped to the cowcatcher and heaved on it.

"Weight's all back, lieutenant! Now I'm at your service."

Two hours afterwards Cawthorne, escorted by the cavalry squad, arrived at the headquarters of the Fifth Brigade and was immediately taken before General Illington. That grizzly old warrior scrutinized him keenly; then growled:

"You are Mr. Cawthorne—Edward Cawthorne, I am informed."

Ned bowed. The general smiled grimly and continued:

"The man who devised those submarines that have been putting the Jap dreadnaughts to sleep?"

"I am the man who financed them, general. The deviser is a man named Wheaton, of Providence."

"Very effective, sir; whoever did it. But —" and a scowl darkened his rugged face, "that is no excuse for experimenting on our battle line. Nothing can be an excuse for that, sir!"

"It was not experiment, general; but demonstration. Shall I explain?"

"I will listen to you, sir, but I warn you that no explanation can relieve you of the consequences of your action. You delayed that freight train for nearly ten minutes—a very serious matter at this time! Orderly! Request Captain Berger to come here."

In a few moments the artillery captain appeared. The general muttered:

"Mr. Cawthorne proposes to explain the method by which he floated that locomotive off the tracks. Be seated, gentlemen!"

"Four years ago," Cawthorne related, "a Mr. Farrow showed clearly that the law of gravitation is influenced by the Hertzian waves, and that they, in turn, could be influenced by electricity. I need not take up time to go into the technicalities of it all, but experimentation, right to the limit, has resulted in an apparatus—a condensing generator—which if so handled as to throw an electric zone around anything that has weight, will eliminate that weight, or more properly, will nullify the gravitation. That locomotive was treated from our gyroplane nearly 5,000 feet above it!"

The captain gasped: "Do you mean, Mr. Cawthorne, that it was done without any communication with the earth—that there was no receiving antennae?"

Cawthorne grinned, slipped his hand in his pocket and drew out a few metal balls, as small as buckshot. He handed a couple to the general and the others to the captain.

"Those are the antennae. Simply solid metal balls! I don't care to tell the composition, just now; but they're perfectly harmless. A bushel of them was carried in the gyroplane and a few handfuls thrown down around the locomotive. Then, when the condensing generator was put into action the current found those

antennae and the gravitation-suppression instantly occurred."

"Good heavens!" ejaculated the general. "It's beyond the realms of possibility, Mr. Cawthorne!"

"Edison says that the limits of the possibilities of science are not yet in sight. What we have done seems impossible because it has never been demonstrated. But, your officer has seen, and has reported to you about the possibility."

"And the influence—or whatever it is—extends only to the radius covered by those balls?" broke in the captain.

"Much further than that, captain. On exhaustive experiments at my country home, conducted very secretly, we found that the influence—that's a good term—extends for fully half a mile on each side of any cluster of balls; although the intensity of the action is at its fullest among those balls. The suppression of gravitation becomes less as the distance increases."

"And yet the altitude of your gyroplane makes no difference?" demanded the general.

"We have worked up to 6,000 feet without finding any difference in the conditions or results."

The captain settled back in his chair and gazed at Cawthorne in blank astonishment, his arms hanging limply on each side of him. The general twisted one end of his gray mustache into his mouth and chewed it meditatively. Presently he growled:

"Why have you not put the war authorities in touch with this, instead of daring to come right onto the field and make a demonstration without even consulting me?"

Cawthorne leaned forward, his brows furrowed deeply and his lips pressed tightly together:

"Two years ago, general, the war authorities were shown this apparatus and they shrugged their shoulders and turned it down. If we had gone to them now with the perfected machine they'd have red-taped it until those Japo-Chinee devils had reached Washington, and then they'd have appointed an investigation committee, with an unlimited period of time for the investigation and tests. War authorities are not field officers, general!"

"That will do, sir! I can listen to no criticisms on the Government." But a twinkle in the stern old eyes softened the harshness of his tones.

"Your gyroplane is here, I suppose you know?"

Cawthorne grinned: "Yes! As soon as I heard where I was to be brought I signaled Kilroth, my assistant, to sail in here and descend. I suppose he's under arrest, too?"

The general smiled grimly but ignored the question.

"How did you expect to follow this up, Mr. Cawthorne?"

"First, by doing just what has happened—getting an interview with you. Next, by sailing over the river and—with your permission—floating all of that Chinee-Japo-Mexican aggregation into the air. How's that?"

The general glanced at the captain, his lips twitching. The next moment both burst into a roar of laughter. As it subsided, the general's hand shot out and grasped Ned's. "We can use you, sir! We'll have to, to save ourselves. I could spare 25 or 30 pounds very willingly, but the rest of my weight I want."

"But, under the regulations of war you'll have to come under my command. I'll appoint you a captain of aviation. Will that do?"

Cawthorne exclaimed bitterly: "It has

been my greatest ambition to hold a commission in this war, general; but I have a cork leg—lost the other at polo. Does that disqualify me?"

"Perhaps," smiled the general. "But the aviation service is hardly down to fine restrictions, yet. We'll overlook the cork. What men do you carry in that aeroplane?"

"Two. Kilroth, one of the brainiest mechanics I ever knew, and Littleby, the —er—chauffeur, but there's room for two others."

The general nodded exultantly. "Captain Berger, you are detailed to accompany Mr. —er—Captain Cawthorne. Your rank, as an artillery officer, is above his, but you will act together. Now, I am going to call a council of war which you will both attend. We will then decide on your future movements."

"And in the meantime," laughed Cawthorne, "where am I to report? I am under arrest, you know."

Another laugh broke from the general. "You are on parole now, captain. Orderly! Report at the guard house that Mr. Kilroth and the pilot of that gyroplane are to be immediately released!"

As the orderly left, Cawthorne saluted and said:

"There are on the track at Denver three sealed freight cars consigned to me. They contain three more gyroplanes and a number of gravitation nullifiers. I didn't dare bring them any further for fear of —er—arrest; but they are now under your orders, general!"

"Good heavens! Three more of those machines all ready! Have them forwarded at once, captain! No! I'd better make the order—special run, too! We need all the reinforcements we can summon just now!"

* * *

Four thousand feet in the air the two captains, Cawthorne and Berger, were cruising over the trenches of the mixed brown and yellow men. Around them were a score of United States aeroplanes guarding the G. N. 1 against attacks by Japo-Chinee airships.

The world just below was sparkling with angry flashes of flame preceding the rattle of machine guns and the explosion of shrapnel. The enemy had brought up no heavy guns, but from the American lines across the river came the terrific crash of field siege cannon. As far as Cawthorne could see on both sides of the Rio Grande were gusts of smoke; sometimes spasmodic; sometimes continuous clouds, for the entire line was in action.

Berger was watching the *selenium-physcho* plate on which, projected by the *J-ray* tube at headquarters, eight miles away, came their orders. Kilroth and Cawthorne were sifting handfuls of the globular antennae—Kilroth called them "attractors"—down onto the line of trenches beneath. Suddenly Berger exclaimed to the pilot:

"Turn back, Everoth! Follow the same line! Now, Captain Cawthorne, put the generator-condenser into action!"

Cawthorne threw the switch and all gazed down. One aeroplane immediately below them was evidently deprived at once of its weight for its pilot lost control and it darted in a complete vertical revolution and then rushed far into the south.

"Must have caught a few of our attractors," grunted Kilroth. "Look below!"

Beneath them was as much confusion as if a tremendous explosion had occurred. Thousands of men were wriggling in the air, mixed up with machine guns, mortars and small arms. Everoth had slowed his motors down to 20 miles an

hour and in 15 minutes the generator condenser had passed over the five-mile line of trenches and utterly demoralized the enemy.

Firing ceased instantly and as the smoke swept away the fighters in the G.N.1 had a clear view as they turned and again sailed over the line. For a half mile ahead and behind them and to each side the enemy and its equipment were in the air, and as a stiff breeze was blowing into the north, thousands of those brown and yellow men and thousands of small arms and big guns were drifting like feathers towards the river.

As the gyroplane passed along and its zone of influence left those aerial enemies, their weight came back as suddenly as it had been nullified, and they dropped onto the plain or into the river. Firing from the American side had ceased and Berger yelled:

"Look Cawthorne! Our men are rushing down the pontoons. They'll have a bridge across in an hour! All we've got to do is to keep these fellows floating and dropping until our troops get across!"

They glided down within 200 feet of the surface. The enemy's aeroplanes had darted away, for as they came within the influence of the nullifier their control became alarmingly erratic. The American airships, previously warned, were prepared and followed the enemy in fierce attack.

Suddenly there was a shrill yell from the pilot, a dark shadow and a crash. One of the enemy's biplanes, recklessly driven or out of control, had rushed into the path of the G.N.1. There was no weight to either of the fliers, but the initial strength of structure was there, and the speed, and in a moment—the nullifier being crumpled out of action—both planes were toppling to the ground. All but Everoth, who came down on rocks and broke both legs, landed in one of the trenches on top of a party of quivering Japs who had crawled back there after the first attack of the mysterious influence. But for the fact that in their aerial flutterings their rifles and even their revolvers had wafted away from them, Cawthorne and his party would have met instant death. But they scrambled out and drawing their own revolvers, clustered about the wrecked gyroplane.

Captain Berger glanced around him. On every side sprawled men, clutching rocks, sagebrush, each other or parts of field guns; anything which, in their abject terror, might keep the weird, mysterious unknown from fluttering them again off their feet. Many of them were dead from plunges from great heights when their weight was restored. Many others were crippled in limbs or ribs. Others were crushed under machine guns or howitzers which had dropped on them.

Down at the extreme right of the line—a position which had been held by Cabelero's Mexicans—Berger saw a large body of them rushing in frantic disorder back across the great plain to timber far in the rear. At another point nearer to him was a Jap officer gesticulating to his men in an effort to reorganize them, but not a man but himself was standing up.

"Here's a rescue, Berger!" shouted Cawthorne, as a big aeroplane glided to the ground close by, and he saw the khaki uniforms.

Instantly a lieutenant sprang out and ran over to them.

"We've room for your party, Captain Cawthorne. You can do nothing more here, I suppose," with a glance at the smashed gyroplane.

Cawthorne looked at Berger, who nodded, and then said:

"One of our men is injured. Is it possible to carry him out of this?"

"Here's another aero coming," replied the lieutenant. "Hi! What's this mean!"

A hundred rods to one side a number of armed Japs were rushing towards them. Cawthorne's party drew close together, revolvers in hand.

"Hold your fire 'til they're within a hundred feet!" commanded Berger, but the next moment Killoth gave a fearful shriek, sprang four feet in the air, his arms waving wildly, and as he came down, he clutched at the wheel of a gun and clung to it, still howling.

The effect on the Japs was instantaneous and astoundingly effective. Every one of them was groveling on his belly, clutching at brush, at rocks, at the hair or arms of his fellows, at anything for an anchorage to his dear old Mother Earth.

Killoth doubled up in a paroxysm of

five hours, or less; we could assemble a machine in two hours and bring it here in another five. Twelve or 15 hours at the most, general!"

"Do it!" exclaimed the general. "I'll order those cars sidetracked at—er—Captain Berger, find out what station that train will reach five hours hence, and dispatch orders to drop those three cars there!" Then turning to Cawthorne: "The enemy has heavy reinforcements coming up, within a hundred and fifty miles of the river; and you'd be back in time to meet them. Take all the men you need and return with the first machine you can get together!"

Then he turned with a chuckling grin to Killoth.

"You, my nullifier impersonator, can, I suppose, assemble the other machines and bring them to the front without delay?"

Killoth grinned and bowed. Ten minutes later the party, with four skilled mechanics, were sailing north.

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Coming northeast from Guaymas Bay, in the Gulf of California, was the main army of the Japo-Chinee-Mexican alliance. Almost in sight of each other train sections were crawling along the railroad, bringing up heavy field guns, aeroplanes,

munitions, supplies and men. On the trails and plains mounted Mexicans of Cabellero's and Valejo's commands were advancing, devastating every ranch, village and town on the 10-mile wide trail.

The head of this army had reached Guadeloupe, 40 miles from the Rio Grande, and had encamped there waiting for more forces to come up; but when the amazing news arrived of the mysterious disaster at the front, they were again put on the march. Presently fugitives from the river straggled in, amazing and terrifying the new men with stories of their flotations.

A great group of aeroplanes appeared, three or four thousand feet above, for excepting a few held back for scouting purposes, every airship in Illington's division was escorting the G.N.2. Hovering about them at respectful distances were a few of the Japo-Chinee airships, and occasional flashes from guns showed spasmodic attempts at interference.

Presently there dropped on the advancing troops small pellets of metal which, coming from so great a height, caused severe wounds on the few men they happened to hit. Then one gyroplane—the G.N.2—darted below the others and glided directly over the column of troops beneath.

Again were the astounding conditions and demoralization at the Rio Grande repeated; but as there was not the slightest breeze the effects were not quite so evident to Cawthorne's party. Men lifting their feet to the march step were unable to replace them with any accuracy and would stagger or drift against each other in utter helplessness. Horses hauling heavy guns and baggage wagons suddenly plunged ahead as all weight behind vanished and then reared and sought in vain for secure footing. In an instant, as the gyroplane glided slowly over them, all order, all discipline and all courage disappeared. Men fluttered along the ground—sometimes head down, sometimes half a dozen clutch-

(Continued on page 300.)

YOU have read, of course, Mr. Stratton's interesting story "Omegon," last month. Here's the continuation: This story is as startling as it is original; moreover it is exceedingly timely and it may sound far more impossible than it really is, for Professor Thomas Jefferson Jackson See, of the Naval Observatory at Mare Island, Cal., has just announced one of the most important and momentous discoveries of the age. He claims that gravity is but another electrical phenomenon caused by electrical currents circulating about atoms of matter. If this is really so—and we have no reason to doubt the new theory—then Mr. Stratton's story is not only probable, but highly possible.

You must read this tale by all means.

laughter, the contagion of which spread to the others.

"Pick up that wounded man!" shouted a voice, and they lifted him into the frame of the second aeroplane. Another instant they were all again in the air, sailing at full speed towards headquarters, while the Japanese officer was leaping among his prostrate men, striking them with the flat of his sword and using language which was perhaps appealing eloquence, but was certainly decorated with an unlimited assortment of profane trimmings.

"Marvelous! marvelous!" muttered General Illington as he heard their report. "Two hundred thousand of the enemy routed, and not one of your men lost!"

"One man injured!" grinned Cawthorne, "and we brought him out."

"The loss of the gyroplane is serious," muttered the general. "The enemy may rally before we get our bridge across; it will take fully an hour, yet; even if the engineers are not attacked by shell."

Captain saluted: "I think, general, that there isn't a gun over there in condition to go into action without repairs or adjustments."

"Have the other gyroplanes left Denver yet?" asked Cawthorne.

The general growled: "A report came in just before you arrived that the train had reached Valencia. But it adds that the line is terribly congested and that the train cannot reach here for 40 or 50 hours—perhaps longer!"

"Valencio!" muttered Cawthorne, "that's 400 miles. An aeroplane could make it in