

THE CURVE OF THE CATENARY

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Illustrated by Dorothy Dulin



"I've been thinking all day," said Hazel. "I haven't had much else to do." Her voice was wistful, and I knew she was thinking of the office, and the war order—have I said it was a war order? It was. Shells. "And you'll have to know about things. I can't let you think I wander about the streets at night, but now that the mill is on double time, and he is trying to get things organized, he has very little time."

"I guess you know you can count on me," I said.

My voice wasn't exactly steady. It was great to have her turn to me, but of course it hurt, too, with Martin's ring on a ribbon around her neck, and all the rest of it. "I'll go over the bank, if you say the word, like the—whatever it was."

"I want you to do something. Do you think you could get to the roof at Boisseau's?"

"I don't see why not."

"In daylight?"

"In daylight. Sure. To tell you the truth, I'm beginning to prefer daylight for most things. It's safer."

"We have lost something, and I think, at least there's a chance, it is on Boisseau's roof. If it isn't, it may be on another near by. I should think you could see from Boisseau's."

"I think I know what you have lost."

"You know!"

She put her hand on my arm, and it was shaking.

"I may be wrong. I'm no sleuth. But if it is what I think it is, I know where it is. Only I'm hanged if I know why there's so much trouble about the thing. It's a camera, isn't it?"

"Yes."

I told her about it. It was rather a long story. She stirred a trifle when I said I had seen her pick up the spring, and when I said that Schmerz, the policeman, had stooped for one like it when he was hurt, she gave a little cry. I took her hand then, and she let me hold it.

Queer about hands, isn't it, how the touch of a girl's mite of a hand will make a fellow either a king or a fool? Honest, I was older and—well, better is the only word I can think of—the minute I felt her cold little paw under mine.

The tear in the awning, the lens, the camera dealer's window, I told her the whole thing. But she stopped me when I told her how I'd lost the lens when I was showing it to Martin.

"But he must have known!" she said. "He would know that it was a lens, and that probably—" Her voice trailed off.

I don't always have to stand under a pile-driver to get things driven home. I saw the whole thing in a minute. Martin upset his glass of water, you remember, and the cloth had been changed. He'd had plenty of time to put the lens in his pocket before I missed it.

"As far as I know, he has the lens now."

"Of course he would get it, if he could." Then she rose to his defense gallantly. That's a good word, and it fits her. "Probably he is waiting to get the rest of the camera. He felt quite sure he could recover it. He knows how vitally important it is."

I felt, rather than saw, that she touched the ribbon around her neck. I patted her hand and let it go. It came over me like seasickness that she belonged to him and that I'd better get used to doing without the hand. It couldn't belong to me.

"I've got the camera, you see," I told her. "At least I know where it is. It's damaged a bit, but the glass affair—that plate, is not broken."

Well, it was worth the price of admission to hear the relief in her voice.

SYNOPSIS.

IT IS the murder of Oliver Gray's taxicab driver and an unknown woman that first involves him in the mystery, and he is kept in it because of his interest in Hazel, his father's stenographer, who seems mysteriously connected with the crimes of the evening—the murder, and the robbery of the dowagers at the assembly ball, Ollie's mother being one of those robbed. Two steel springs and a lost camera figure in the mystery, one of the springs being in Hazel's possession, and the other Ollie has. The camera has a broken lens and an undeveloped plate in it. Ollie calls on Hazel and hears a bit of mysterious conversation between Hazel and Martin. After Martin's departure Ollie proposes to Hazel. His answer is to be shown a diamond ring which she wears around her neck—she is engaged to Martin.

After a visit from an officer Ollie's suspicions against his valet, Sharp, are lessened. He suspected Sharp—who had left the Gray household while Ollie was absent on pretense of returning to England to join the army—of using his ticket to the assembly ball the night of the robbery, and that he was in some way connected with the crime. The officer tells Ollie that he knows all about the camera, but Ollie is very noncommittal on the subject. That night he calls on Hazel. As he approaches the house Hazel's father comes out and he is forced to hide. After the old man leaves Ollie goes up to the front door. He hears two blows struck, silence, then two more. He is about to see what the trouble is when he is struck a swift, stinging blow, drawing the blood to his face. In terror, he flees down the embankment and finds Hazel there, nervous and frightened.

She didn't cry, I think, although she gave a dry little sob.

"Then everything is all right," she said. "Except—what can never be made right."

I turned around on the bench and faced her.

"There is nothing that can never be made right, except death, Hazel," I said.

"That is what I mean."

But even when I'd got her story, and was wondering why I hadn't known it all from the first, for it was so simple. I knew I was not at the end of things. Where did the robbery come in?

Here was a straight and direct story, an accident and its results. There was not a break in it; cause and result, both were there. But I was not satisfied.

I'd better tell Hazel's story myself. It took a long time. We heard her father come in from his walk and enter the house. It got cooler, and I put my heavy motor coat around her shoulders. She was so intent that I don't believe she knew it.

This is what had happened.

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THE old man liked to take pictures. He had a lot of time on his hands, and he used to sit on the brow of the hill and take views of the city. It grew on him. He experimented, tried color work, went through all the phases, even to making cameras of his own. He turned a pantry into a workroom, and potted about all day.

Then one day he saw some boys with a kite, and he tried fastening a small camera to a kite and snapping the shutter by pulling the string.

He used to get the kite out over the edge of the hill, and the day he got a view of a steamboat from above he couldn't eat from excitement.

But the string system was bad. The string jerked the camera. So for months he worked on an arrangement to set off the spring automatically.

Did you ever, when you were a kid, send a message up to a kite?

You put a bit of paper or something light on the kite string, and it crawls up and up. I did it when I was a youngster—named the kite for my governess, and

used to send up notes saying I wish she'd die, or take scarlet fever, or something. I made quite a reputation on it among the children in the neighborhood.

He made what he called a messenger, but it was too heavy. It wouldn't climb, or the string broke. Something was always wrong.

"It was pathetic," Hazel said. "He got box kites, and the camera would have done the work. But the messenger was the trouble. He designed it to touch the camera and make the exposure. But he lost several cameras in the river, and even when it did take the picture, the messenger set it to oscillating, and the plate was useless."

Then the war came, and he got the idea of patenting an arrangement for sending kites at night over the enemy's trenches and taking photographs when the sun came up. He worked day and night.

It would be a smaller target than an aeroplane, he insisted, and the camera did not make mistakes. With an observer on an aeroplane the human element had to be figured on. He planned to discount the human element. Crazy? I don't know. It didn't sound crazy to me when she told me.

He got to be quite a kite flyer. He connected box kites in a series, and once he darned near got carried over the hill and dropped in the river. On quiet days he worked at the messenger, and on windy days he was out at dawn, playing.

It made him happy, Hazel said; he improved in health and slept like a kid. And at last he wrote to the British government.

Well, he never heard from them, and that fretted him. But he worked on. He made kites of a sort of sky-blue color, so they could not be seen, and one day he came in from his workshop, with his voice shaking, and said he'd got the idea at last.

He had. He'd built a canvas messenger that would climb to the kite, touch a pneumatic tube, give the camera thirty seconds to steady itself after the impact, and then make the exposure. He was so excited that he cried over it, poor old chap.

"He started that night to make the drawings and the model," Hazel said. "I had spoken to Mr. Martin and he seemed interested. I hardly knew Mr. Martin then, but I asked him about it one day at the office, and he said he would like to see it. That—that was the beginning of things."

As the kites and cameras got larger, the strongest cord would snap in a gale. They solved that difficulty by using wire. Fine piano wire. The old man made a big reel, with a hand-crank, and let the wind run the kite out. Then he brought it in by hand. It was hard work, and once he let go of it, and the crank came around and struck him.

Hazel found him lying senseless when she came home, and the kites were in the river—camera, messenger, everything.

"Then we got the motor," she said. "It was a cheap gasoline engine, and it worked wonderfully. All the trouble seemed to be over. But it was necessary, for his purpose, to make it exact. He worked out a lot of formulas. To do what he wanted, it was necessary to know when it was over a given spot. He had a map of the city, and an instrument for measuring the direction and velocity of the wind. Of course, with the engine in one place, he had to follow the wind. But, in case it was adopted by any army, he said it would be placed on a motor truck, and he could send it wherever he wanted. He spent a lot of time over the formulas."

"I know," I said. "The curve of the catenary!"

"That is the dip in the wire," she told me. "You have to allow for it. The kite is never as far away as the wire out would indicate."

"And the little symbol in red ink that looked like an ice tong?"

"Angle of the kite with the true horizon."

"How many, many things you know!"

"I know some very terrible things," she said, with a shudder. And I let her go on without interruption.

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IT SEEMED that things began to go wrong about a month before. In his abstraction the old man forgot to put the rubber cover over the reel one night, and it rained and the wire rusted.

He oiled and polished for a week, but the life seemed to be out of the stuff. It kinked and twisted, I believe, and he got nervous.

"Howard Martin warned him," she said, "that an accident might be dangerous. A thin steel wire, you see, dropping across a city might do terrible things. He advised him to send out the kites at night, when the streets were empty, and he did it."

I give you my word, up to that minute I hadn't seen what she was driving at. I saw it then, all right. A thin steel wire across a city! Great Scott!

The wire had come from Germany, and there was no more of it to be had. They got a new wire, but it was not exactly right, and on the night before the robbery it had broken.

"We were terrified," she said. "Mr. Martin took his car and went through the streets, but nothing seemed to be wrong, except that it had short-circuited the wires in part of the city. Do you remember how nervous I was that morning in the office? I think I cried."

Did I remember!

Well, the old man was not as frightened as the rest of them. Some new wire had come and he spent the day getting it on the reel. And Martin had traced the kites out into the country and brought back the camera. Martin went up in the afternoon and helped him with the wire and by 5 o'clock it was ready. But he charged Hazel to hold the old gentleman back until at least two hours after midnight, when the streets were empty.

She was tired, poor kid, and having