

Camera Dick

By Owen P. White

Because Edwin Fearon can see right into the middle of a sheet of paper, forgers are finding it difficult to make a living these days

UNTIL fairly recently forgery was a thriving profession that nicked the public for millions of easy money every year. Forgers raised checks, doctored wills, faked notes and got away with it. Today it is practically impossible for a crook to tamper with a written document without leaving behind him such a broad trail that, although it is entirely invisible to the human eye, or to the ordinary microscope, it is nevertheless easily photographed.

But how can anyone photograph the invisible? To their sorrow the forgers have discovered that it can be done quickly by flooding specimens of their handiwork with ultraviolet rays and snapping a camera on them. This produces perfect likenesses of the original documents just as they were before alteration. It sounds amazing but to scientific photographers, and especially to Mr. Edwin H. Fearon of Pittsburgh, who makes a specialty of it, it is all part of the day's work.

Nearly all substances are fluorescent. That means that when they are irradiated with ultraviolet rays, which are invisible to the human eye, they respond by giving forth a light of their own by which they can be photographed. If you are placed in a totally dark room and a stream of ultraviolet rays which you can neither see nor feel is poured upon you, your skin, fingernails, hair and perhaps parts of your clothing will emit a light sufficiently intense for the camera to record it.

Apply this phenomenon of fluorescence to disputed documents and see how it works. Paper, composed largely of cellulose, fluoresces strongly in ultraviolet. If paper is written on with ink and the ink subsequently is erased or bleached out, one of two things, or maybe both, will happen. Either the thin lines in the paper from which the ink has been eradicated will have a lower fluorescence than the rest of it, or else the iron in the ink, from which only the color has been removed, will have a higher one. Thus either way, owing to the difference in fluorescence between the body of the paper and the lines where the ink has been, an ultraviolet photograph will reveal the original writing which is entirely invisible under ordinary light. There are two methods by which those ultraviolet pictures can be made.

The first is strictly analogous to ordinary photography in that the picture is made by the total light reflected from the object. The only difference here is that as all visible light is excluded and as the object is illuminated with invisible ultraviolet it is only the reflected ultraviolet that acts upon the plate. Generally this method gets its man. But if it doesn't, if the document remains stubborn, and if it appears to the photographer that a clever crook is about to slip through his fingers, he tries

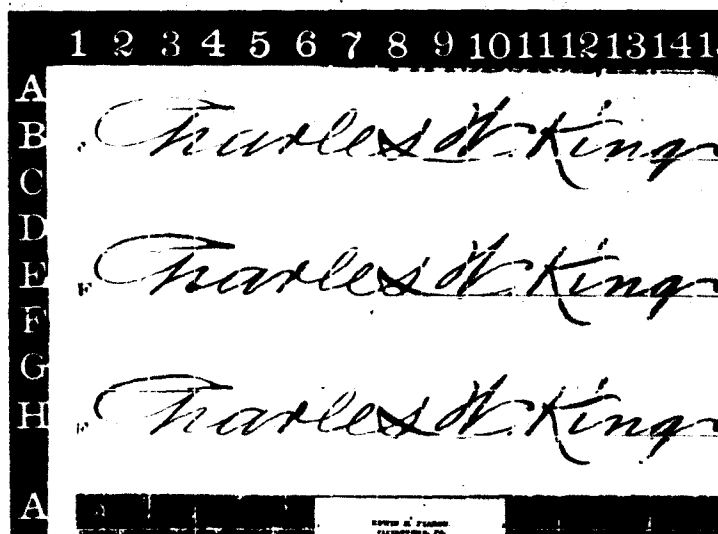
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Even the cleverest of forgeries fail when Edwin H. Fearon, of Pittsburgh, goes to work on them with his lights and cameras. Above, he is using his portable ultraviolet lamp to examine a suspected document

St. Louis, Mo., May 4, 1930
Apr. 4th
 This is my last will. I give all of my property including
 my house located at 5238 North Adams Street and my money
 in the First National Bank to my brother, William W. Moore.
 He has been kind to me, and I want him to have all that I
 possess after my debts are paid.
 If my brother should die in my life time then such property
 as I may possess at my death is to be divided equally among
 his children.
 C. W. Moore

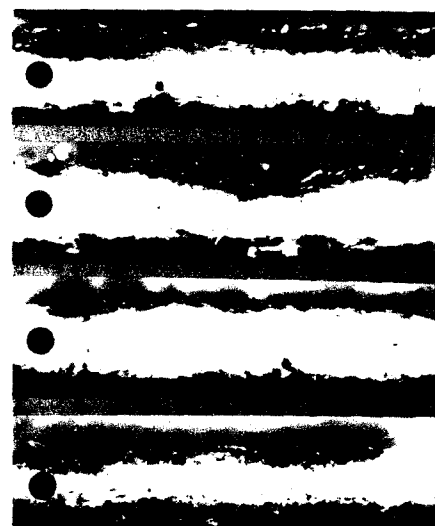
The persons whose names are written below have signed their names as witnesses to this my last will at my request, and have signed their names in the presence of each other.



Left, ultraviolet light reveals a fake will. The signature is genuine but the writing on what was originally a business note has been washed out and the "last will" typed in

Below, left, the top signature is genuine, the others are tracings. Photo against scale proves them to be exactly similar in every detail, an impossibility in normal writing

Below, microphotograph reveals that different pen strokes cause different degrees of ink penetration; no forger could duplicate them exactly



LOVE COMES TOO SOON

By Nancy Titus

ILLUSTRATED BY GILBERT DARLING

**Her tears were not for her departed lover,
but because she knew she would forget him**

DINAH was aware of Chris before she actually saw him. That would have sounded funny if she had told anyone. The more strange that she should have been aware of him when five minutes before she had been thinking only that Stacey Wood was about to ask for a date.

She was sitting on the rail of the runway that went down to the main dock of the Yacht Club, idly hauling up and letting down the bait box, watching the thrashing, flashing mass of silver killies in the wire cage. Her rod rested against the rail on one side and Stacey on the other. A tall, thin boy with a peeling nose and a wide grin, wearing a crew cut and his prep-school sweater over a pair of brief trunks, he leaned on sunburned elbows.

He was working up to a date. Dinah could tell. He'd been building for it ever since he'd come down from St. Michael's, asking her to go along with the gang in his Star, offering to teach her how to handle her new Wee Scot.

"Going to fish, Di?" he asked her now. "Those killies could swallow anything you'd catch around here."

"Fish?" Dinah asked, lifting brows turned to a pale silver by the sun and sliding green eyes sideways at him. She could do things like that this year. Last year, when she was fifteen and still had braces on her teeth, she could only stammer in Stacey's presence. "What makes you think I'm going to fish?"

"Well, circumstantial evidence, I suppose. Your rod and the bait. Two and two."

"You couldn't hang a cat on circumstantial evidence."

She could do that, too—make light banter with him where last summer she blushed at his "Hello, kid" and watched miserably as he went on to joke with older, smoother girls.

"What d'you want the bait for then?"

"My breath."

"Oh, hey!"

"I want to listen to your every word with it baited, don't I?"

STACEY tipped back his head and laughed and Dinah was pleased. He thought she was witty. He was going to ask her to go out with him any minute now.

This was exactly what she had prayed for last summer. The only thing—well—it wasn't quite as terribly, achingly important as it had been then. She didn't know why. It was just that she'd had dreams this spring—waking dreams—of love and romance that were different than those she had had last summer. Then, all she had wanted was to dance with Stacey under the pagodalike roof of the Pandemonium, the club's big outdoor dance pavilion, to wear a red chiffon dress and hear him say she was the most beautiful girl he'd ever seen. Now, she knew, vaguely, she wanted more than to be taken out, than to be admired. She wanted to—*feel* . . . She had a queer sensation in her breast as though it were full of bulbs getting ready to send forth shoots. But somehow Stacey wasn't—he wasn't the one for whom, in her fancies, they blossomed.

Nevertheless, she wanted to hear him ask for that date.

"Baited breath," he was saying. "Di, you're a demon. Look—"

Over his words she heard the putt-putt-putt of the club launch motor. She turned her head, impelled to do so for no reason at all. The boat was coming in, digging a furrow in the choppy water and sending the plowed spindrift up in fans either side of the bow. There was a man at the wheel. The launch was still so far away she could see only, indistinctly, a blue shirt and white gob hat. It might be Joe, the head boatman, or any of his assistants, yet she knew instinctively it wasn't. There was something about the way this man stood with his head back. A queer little pulse began to beat in her throat.

Now she could see him more clearly. He must be the new man they'd been talking about getting. But he was much younger than the others. About Stacey's age. Yet he had the build of a much older boy; and she thought she had never seen anyone so brown. It was a rich, deep bronze, not a surface tan like that of most of the boys here at the club, but burned in by constant sun and wind.

"—doing anything—" she dimly heard (Continued on page 60)

"If you really loved her," she said, "nobody could have made you break it up. When you're in love—you're just in love. That's all there is to it." "Yeah," Stacey said