

F. G. COTTRELL IS REAL SCIENTIST

New Chief of the Bureau of Mines Has Notable Record.

GAVE WORLD SECRET FREE

Invented Smoke-Consuming Device That Saved Many Valuable By-Products—Smithsonian Institution Gets the Profits.

Washington.—Frederick G. Cottrell, a true scientist, who has given away the wealth his brain has produced and continued to work for the small stipend of a federal employee, has been appointed the chief of one of the government's greatest scientific agencies—the bureau of mines.

In the group of scientists which revolves around the Cosmos club in Washington, there is much satisfaction over this appointment. Too often the man at the head of a government scientific bureau is more of a politician than a scientist. But this cannot be said of Doctor Cottrell.

He has many claims to the appreciation of his fellows. He is a man who does things, and says little. He is that rare thing, an American who cares little for either money or publicity.

The clearest proof of the possession of the qualities of the true scientist that this man has ever given, a demonstration deemed a model to be followed by those of his kind, came a decade ago, when he made a discovery of such practical value that it was obviously capable of being made to yield all the riches any man might desire. After having demonstrated its possibilities Doctor Cottrell gave it away. He gave it to the cause of science. He gave it as an endowment to be used to aid other scientific research. Doctor Cottrell's invention is a device, which may be put into a smokestack of a factory, or a smelter, or even the chimney of your own house, and which precipitates the particles that make up smoke, thus preventing them from emerging to smother the country, and also obtaining valuable by-products.

He Made Good Decade Ago.

The first demonstration of Doctor Cottrell's invention came more than a decade ago when he was a young professor at the University of California. There was a smelter near by and the fumes from this smelter were a nuisance to the community, making it unpleasant for the residents and blighting the vegetation. Doctor Cottrell worked in his laboratory and developed his plan for preventing this offense on the part of the smelter. The device which he invented was electrical. As the fumes passed up between electrodes the result was that all suspended particles in them were deposited upon these plates.

Doctor Cottrell won local fame by this invention. At Riverdale, a town not far away, there was a huge cement factory, which had likewise become a nuisance in the community because the dust from it found its way into the blossoms of orange groves near by and interfered with the development of the fruit. The orange growers brought suit against the cement factory and the litigation which ensued is said to have cost a million dollars. Eventually the cement people heard of the local renown of the scientist at the University of California and of his ability to precipitate the materials in smokestacks. Doctor Cottrell went to Riverdale and installed his apparatus. The result was that the nuisance was abated and it was necessary that the community sacrifice neither its cement plant nor its oranges.

Smoke Contained Potash.

The electrodes in the smokestacks of this company yielded every day a hundred tons of the minute particles, which would otherwise have been spread out on the community. At the suggestion of Doctor Cottrell this company examined into the quality of the material thus precipitated. They found that it contained large quantities of potash, and potash is the basis of one of the most valuable fertilizers in the world.

This accomplishment was back of him when the young scientist gave up his work as a teacher and came to Washington to enter the government service. The idea of an application of his findings slumbered for years, but today this device has been installed in scores of great plants throughout the United States.

Doctor Cottrell gave his patents on this process to science. He turned them over to the Smithsonian Institution to demonstrate. A research corporation was afterward formed and this corporation is marketing the patents and realizing royalties from them. The war materially interfered with the installation of these devices, but as far back as 1915 the net profits were running up to \$100,000 a year. Now that the war is over it is thought the device will be generally applied throughout industry, and there would be no surprise on the part of the research corporation if it should, in a year or two, be yielding a million dollars a year in clear profits.

Her Destiny Obscure.
Lawrenceburg, Ind.—Mrs. Elizabeth A. Myers, aged 64, a widow, who is dead from the effects of a broken hip, sustained in a fall down a stairway at her home, died in the room in which she was born and in which she spent all her life.

SHREWD TRICKS IN SMUGGLING

Ingenuity Perverted in Trying to Avoid Payment of Duties on Gems.

CLEVER SCHEME FRUSTRATED

Customs Inspectors Find \$10,000 Worth of Diamonds Concealed in Fountain Pens and Tube of Tooth Paste.

"I often wonder what would happen if half of the ingenuity which is expended in doing or trying to do crooked things in business were spent in carrying it on along honest and accepted lines." So spoke one of the best-known men in the local jewelry trade; the remark being inspired by the recent frustration of a very clever scheme for smuggling diamonds past the customs inspectors at this port. In this case, an attempt had been made to smuggle in \$10,000 worth of these gems—13 separate stones—by concealing them in the barrels of two fountain pens and in a tube of tooth paste.

"Of course," the jewelry merchant went on, "if a man has any tendency toward smuggling, the present price of diamonds and the high import duties levied on them afford him plenty of temptation. Under the present tariff an importer of diamonds must pay one-fifth of their value to the government if they are cut, and one-tenth if they are brought in rough. Consequently, if the man with the fountain pens and the tooth paste had been successful, he would have saved from \$1,000 to \$2,000 in duties, depending on whether his stones were cut or uncut.

Many Clever Schemes.

"But, even in the old days, when the lower import duties made smuggling less attractive from a financial viewpoint than it seems to be now, all kinds of schemes were tried to beat the customs. Some of them worked for a long time, but sooner or later there was a slip-up somewhere. "In one interesting case that came to my attention the man involved had been under suspicion for some time, but the treasury department officials had never been able to get anything on him. They were morally certain that he was smuggling in diamonds, but that was not enough to convict him, and they never could catch him with the necessary evidence. He always worked without accomplices, which made the customs people all the more ashamed of themselves for being unable to land him.

"Finally, the local authorities got word from their agents on the other side that the suspected man was buying diamonds in a large way, and they immediately instructed those agents to trail him day and night and supply all possible data. This was done, but through some slip the suspect was tipped off to what he was up against. He immediately laid plans to cover himself. He finally wrote a letter, signed with a fictitious name, to the collector of the port here, giving what seemed to be inside information on the suspect and his operations. Not only was the name of the ship on which he would reach this country given, together with the number of the stateroom and other data, but the letter actually told in what part of a certain trunk the diamonds could be found.

Found Paste Gems.

"All of the details were so accurate that it was an easy matter for the local officials to follow them up. The suspected trunk was locked and opened, and, sure enough, there lay a big collection of stones. The customs men were elated; but when the matter was sifted down it was found that the gems were paste and that the man could not be held on a major charge. He was released, after certain necessary ceremonies had been completed, and promptly left for the hotel in which he made his home. Once there, he had his wife peel a huge porous plaster from his back. Under the plaster were the real diamonds.

"In another case the officials were also morally certain that a certain man was smuggling, but here again they were unable to get the evidence necessary to convict. This man, however, worked with accomplices and, when he was finally captured through no fault of his own, his system came to light. "It was simplicity itself. He would cache the diamonds in his stateroom, the number of which was always known in advance to the chief accomplice, and leave the ship. The accomplice always booked eastbound passage on the same steamer and, in the same room, which he got through a friendly clerk in the office of the steamship company. He went aboard as early as possible, and hid the gems up into an inconspicuous bundle. Shortly before the ship sailed a woman would come to bid him bon voyage. She stayed on the ship until the final whistle blew, and then, in the resultant excitement and bustle, returned to the dock without attracting undue attention. With her she carried the smuggled diamonds. It was not until one time, when a rather elderly woman filled the role of the friend of the chief accomplice and had a fainting spell, that the game was discovered. She was taken to a hospital for treatment, and there the diamonds were found on her person."

BIG GROWTH OF 'SPECIAL' MAIL

Increased From 896,344 Pieces the First Year to 58,544,387 in 1919.

HISTORY OF INAUGURATION

Sponsor of Bill Providing for Special Delivery of Mail Tells of Hard Time He Had Getting It Through.

New York.—How the much-used special delivery stamp was passed upon by congress after a bitter fight almost thirty-five years ago after a bill providing for its use was introduced by Dr. Charles R. Skinner, now legislative librarian and formerly state superintendent of instruction, was recently related by the former congressman. The number of these stamps has increased from 896,344 during the first fiscal year of nine months to 58,544,387 in 1919. Between 1885, the year of the adoption of the stamp bill, and last year, Doctor Skinner says, 450,072,072 pieces of mail bearing the ten-cent stamp were delivered.

"In his report of 1883 as first assistant postmaster general Frank Hatton alluded to the success of many companies organized to deliver letters by messenger, and suggested that the government might with propriety adopt plans for the speedy delivery of letters, using the mails and clerical force to accomplish the results sought." writes Doctor Skinner in a recent issue of State Service, a magazine devoted to the government of New York state and its affairs. "Mr. Hatton's suggestion quickly came to my notice as a representative in congress, and was the subject of many conferences between myself and my friend, Edward M. Gates, then postmaster, at my home in Watertown. The plan seemed to be feasible and was favorably considered. As a result of frequent conferences a bill providing for a special delivery stamp, embodying the features practically as they stand today, was prepared by me for introduction at the first session of the forty-eighth congress in December, 1883.

Use at First Restricted.

"The bill authorized the postmaster general to provide a special stamp of the value of ten cents, which when placed upon a letter in addition to the regular postage, should entitle such letter to immediate delivery at any free delivery office, or in any town of 4,000 or more inhabitants, up to the hour of midnight each day. It provided that eight cents of the ten-cent

fee might be used by the government to cover the cost of delivery by messenger, leaving the government a gross profit of two cents on each stamp sold. It was urged that in cases of sickness, emergency or quick service to newspapers the immediate delivery of a letter would be a convenience which the public would appreciate.

"The service was first restricted to the delivery of letters at any free delivery office, or in any town of 4,000 or more inhabitants. But on August 4, 1886, it was extended to provide for the delivery of mail matters specially stamped at any free delivery office, or within one mile of every other office."

From the introduction of the bill, when it was referred to the committee on post offices and post roads by Speaker John G. Carlisle, until its final enactment, dozens of pages in the Congressional Record were used to report the arguments on the bill between members of the house, writes Doctor Skinner. This committee, which had among its members the late Senator Money of Mississippi, Harry Bingham of Philadelphia and John Cosgrove of Missouri, reported favorably on the measure January 16, 1884, and it started its "rough career" before the congressmen one week later, the writer continues.

Fresh Opposition to It.

It was made a special order for February 13, 1885, Doctor Skinner continues, and all went well until the paragraph relating to the special stamp was reached, when the opposition broke out afresh. Mr. McMillin, who, according to the present librarian, seemed to have a particular prejudice against the ten-cent stamp feature, said the proposition changed existing laws, and that it was also legislation upon an appropriation bill, which was against the rules of the house, unless it could be shown that the proposition reduced expenditures. It was finally passed by the house, carrying with it the special stamp clause.

But opposition to the stamp was even more vigorous in the senate than in the house of representatives, he says, and many amendments were voted upon and accepted, but they were just as quickly disagreed with by members of the house. After a bitter struggle the bill with the special stamp feature was finally passed by a vote of 79 to 66. It was signed by President Arthur and made a law. It went into effect October 1, 1885, almost two years after its introduction.

On March 2, 1902, the law was amended, providing that ten cents in ordinary stamps, in addition to regular postage affixed to a letter or package marked "special delivery," entitled the matter to all privileges.

Seeking Improved Company.

Petersburg, Ky.—Brick of the Boone county distillery is being used to build a church at Paris, Ky. The building is being razed and the brick shipped to Paris.

PASSENGER AIR LINE

Government Has Plan Under Consideration.

Dirigibles Between New York and San Francisco Project Being Discussed.

Cambridge, Mass.—A dirigible airship line to engage in regular passenger service between New York and San Francisco is a project in which war department officials would like to interest capital, with a view to having an air fleet immediately available in case of war, according to Prof. Harvey N. Davis of Harvard university. Prof. Davis is engaged in expert work on helium gas for the department, and is designing a plant to be built at Langley field, Virginia, where the expensive gas after use in the military lighter than-air craft may be washed free of impurities and used again.

Estimates by Col. William N. Hensley of the war department indicate that it will be possible for passengers to go by airship overland at a cost of about 5 cents a mile, at a speed of 68 to 70 miles an hour.

"The advent of the airship as a regular passenger carrier is much nearer than many persons in this country realize," said Mr. Davis. "I shall be surprised if the coming summer does not see a line of airships in operation by an English firm between the United States and the British Isles, and I have no doubt whatever that a year from now will see regular weekly sailings. By the use of helium all danger of disaster from explosions such as have wrecked big balloons filled with hydrogen will be averted.

"There will be no fear of ignition of the gas by bullets, lightning or sparks from the engine. In fact, it is pointed out that the engines may be placed inside the outer shell of the dirigible, and that except for observation purposes no car need be carried outside the big bag."

While the present cost of producing helium is about ten times that of hydrogen, Professor Davis believes that development of its manufacture will result in a cheaper product. Helium will be used to furnish the lifting power in the \$2,500,000 dirigible which the navy department expects to obtain from an English manufacturer soon.

Tommy in a Moving Picture Stunt.

Columbus, Ind.—Tommy, a large Maltese cat, found himself marooned on top of a telephone pole by the rapid rise of a creek. The owner of the cat went to the next pole, which the water did not reach, and called to the cat. The animal finally walked the cable between the poles to safety.

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