

Murray's Light by Donald Wandrei

THE SPARK that ignited strange fires in countless homes was I furnished by Colton Cooke. Any one else might have obtained the interview, but it so happened that Colton Cooke was the first reporter who heard about it. The thing had apparently been going on for a little while even before it came to his attention.

It was far from being a matter of chance, however. The Leawiths invited him in for dinner one evening. They were old friends of his and followed their customary ceremony of serving cocktails in the living room before dinner.

Both Roy and Edith had an air about them, a very definite air, like that of the cat who licked all the cream, or of practical jokers about to spring a surprise.

"What's the matter with you two?" Cooke demanded. "You're acting like a couple of amateur sleuths. Don't tell me this is somebody's birthday or anniversary or something."

"Who? Us? Why, no!" they chorused. Roy added, "Bring your cocktail with you and we'll start."

Cooke finished it in a gulp and deftly took Edith's arm, allowing Roy to trot behind them.

It was a neatly set table in the dining room. Everything was neat and orderly and quietly tasteful. But something was wrong. Colton paused inside the doorway. He felt that both Edith and Roy were waiting for him to speak a word or make some special action. He glanced around the room again. Not one of the wall lights was burning. He looked back at the table. Then he caught the reason for the air of mystery.

There was a light in the middle of the table. It was not a candle, nor an electric light, nor a gas lamp, nor a lantern. From a distance, at least, it did not seem like any form of illumination with which he was familiar.

"What the deuce is that?" Cooke asked as he walked over to the table to study the object at close hand.

A curious item it proved to be. A pear-shaped glass bulb, somewhat like the familiar electric light bulb, had its narrow end embedded in a wooden base. Two flanges of gleaming metal curved with the glass and almost met at the top. Light poured from the globe—soft, steady, strong light that filled the room with an even and restful illumination, save where the flanges became panellike shadows on opposite walls of the room.

A milky, radiant mist filled the globe. It contained no wires, filaments, electrodes, or contrivances of any sort. Nothing but that bright mist. It suggested the light that emitted from neon, argon, and other rare gases used for illumination, but such light pulsed and flickered, while this light remained motionless. And cold. The glass was as cool to the touch as fresh water.

Colton suspected a trick. He lifted the object. It came away free. There were no hidden wires in the base, no power connection in the table. Light continued to shine from the bulb. The transparent glass remained as cool to the touch as night air.

The reporter whirled around. "What is this—Aladdin's Magic Lamp?"

Roy answered with a grin, "I thought it would get you. It's an Arctolight. They've just been put on the market."

"A what? Spell it."

Roy obliged. Colton continued, "Where did you get it?"

"From the chap who makes them. Fellow by the name of Murray—D. V. Murray. You can't buy them at stores. He's a funny sort of duck. Sells direct; won't fill quantity orders, and won't sell to dealers."

"What did this one cost you?"

"Three dollars. It's guaranteed for six months."

Colton whistled. "Only three dollars? What's Murray's address?"

He jotted the answer down and bolted from the room.

"Wait a minute—" Roy began to protest.

Cooke retorted, "Wait till somebody else grabs off a swell story and a million-dollar scoop? Not on your life. I hate to run out on you, but you and Edith go ahead without me and I'll drop in after I've got the yarn. It's your own fault for putting me onto it!"

With that he was gone.

A taxi whirled him to the given address a good half hour later. Cooke got out in front of a dilapidated old three-story building near the Hudson River on the lower west tip of Manhattan. It was a factory and warehouse district, adutting a slum area. Most of the buildings were dark. He did not see a single passer-by. The spires of Wall Street and the financial district rose not far away.

Here was quiet and desertion. But light shone from the edges and sills of every curtained window in the particular edifice in front of which he stood. The structure had show windows—empty on the first floor, and apartment windows above. Evidently it was one of those hybrid buildings common to the area.

Cooke walked into a small lobby. Two doors made a right angle. He knew without further investigation that the left door led to a flight of stairs. The name-slot underneath the bell button had a card: "D. V. Murray." The door to his right bore the gild-lettered words: "Arctolight Supply Company, President, D. V. Murray." From within came sounds of activity.

The reporter tried the door but it was locked. He pounded insistently. After perhaps a half minute's wait, he heard the sound of heavy footsteps, then the scrape of a bolt being drawn. The door jerked partway open.

AN IMMENSE MAN blocked the opening. He had stiff, black hair and a beard of flaming red. His eyes glowered suspiciously. Great strength and determination were stamped on his rugged features. His gnarled hands, bunched into ominous fists, hung from long arms and powerful shoulders.

"Well? What do you want? Don't stand there like an idiot!" The apparition roared. It may have meant to speak, but its voice boomed. Cooke wondered what sort of thunder would emerge if its owner became really angry. "I want to see Mr. Murray."

The giant retorted, "Now that your wish has been granted, get out."

Into the slamming door, Cooke protested, "I'm a reporter. I'm worth a million dollars to you. Take it or leave it. No strings, no conditions, no buy, no sell, no nothing."

"I don't want any damn reporters nosing around. You can—"

The news hound shouted, "Snap out of it! Haven't you even got half a brain? I'm here to do you a favor. I'm not prying into your affairs. I don't give a hoot who you are or what you've done, except in terms of public interest. You've discovered something that's worth a front-page feature and millions of dollars worth of free publicity to you if it's what I think it is. The public will lap it up. They'll flood you with orders. You'll get sales and advertising overnight that you couldn't buy no matter how much you offered. Now what about it?"

Murray stared at him, more in surprise than anger. Evidently he was not used to such rough reception as he dealt others. He flung the door open and yanked Cooke inside. "If it's a gag, I'll beat you to a pulp. I can do it."

Cooke snapped, "Save yourself the trouble." He stood in an office, illuminated by several of the queer bulbs. A desk occupied one corner beside a filing case and a small safe. The rest of the room was piled high with wrapped packages.

"Sit down," Murray commanded, brusquely.

There being no place to sit, Cooke remained standing. "I just saw an Arctolight at a friend's home. I want to know more about it."

"The only person in the world who knows all about it is me, and I'm not telling."

"You don't have to tell all," Cooke answered. "I simply want a general idea which I'll dress up in my own language. The public is mainly interested in the fact and its value, not the details. It probably couldn't understand the details anyway. Like the Einstein theories, you know."

Murray hauled out a pair of evil-looking stogies. "Have one?" Cooke lighted it and went through

torture for the service of his profession.

"You've discovered the principle of cold light?"

"Yes. That and other things."

"How long have the magic lamps been on the market?"

"Less than a week. We've been manufacturing for a month. We accumulated a stock before we told friends."

"Who are 'we'?"

"My sister, three trusted relatives and myself."

"You mean that the five of you are the whole works? You make and package and sell the units here? A family business?"

"Yes. We're the whole company."

"My friend Leawith said he paid three bucks for his Arctolight. How much does it cost to manufacture them?"

Murray hesitated but finally admitted, "It costs just over fifty cents per unit. We buy the bulbs, bases, and horseshoe bars in lots of ten thousand. What I put in them is my secret."

"How many per day can you turn out?"

"Right now, we average five hundred. I may take a few more relatives in later and get the output up to five or ten thousand."

Colton Cooke whistled. "Holy Jumping Jerusalem! \$1,250 per day clear profit now! \$25,000 per day if you turn out ten thousand of them! Whee-ew! How about letting me put a little money in the business?"

The giant laughed. "There won't be that much profit. I'm putting nine tenths of the money back into the business for supplies, reserves, and expansion. Besides, I'll keep lowering the price as we accumulate funds. The high price now is merely to give us an ample working margin.

"You see, it's this way. I've been struggling with this idea all my life. Cold light. I started out as an electrical engineer. I worked for several of the big electric companies and I hate them all. They rooked me out of several discoveries I made, just as they rooked the public. I quit after I saved up a little money. I went ahead on my own until I found what I was looking for. Cold light. Inexhaustible light. A new principle that has nothing to do with electric power.

"See what I'm driving at? I've discovered something that every one who owns a house or apartment will want. No more electric bills, no paying high monthly charges to the utility companies. One Arctolight will last six months, perhaps indefinitely. They're foolproof. And when I get the cost down to a dollar or less, they ought to sell by the million.

"You own all the patent rights?"

"There aren't any."

The answer startled Cooke. "Didn't you patent the invention? Why not?"

The engineer explained. "Because the big utility monopolies, with all their wealth and influence, could have challenged the patent application, or infringed the patent and flooded the market. I didn't have the money to fight a long court battle. Even if I did and won, years later, the utilities would still have the market cornered, and their own scientists by then could have worked out a variation of the principle. They might move heaven and earth first of all to buy the patent rights, but I wouldn't and won't sell under any conditions."

Cooke shook his head. "You're taking a big risk just to carry out a grudge against big business. Man, you'll be big business in person before a year passes! Give me some sort of idea that I can use as a convincing basis for the feature. This principle—"

Murray hedged. "I won't spill the secret, but you might use something of this sort. Say that I've discovered a way of sensitizing one of the rare gases so that cosmic rays, which are always present around us, strike the gas and produce light without heat. After six months or a year, the gas atoms wear out and the light grows feeble. Will that serve the purpose?"

"It will have to. You're sure you haven't accomplished the wireless transmission of power?"

Murray smiled. The reporter jotted down a few more notes and hurried out.

COLTON COOKE was even better than his word. The nature of Murray's invention fired his imagination. He visualized Arctolights flooding the country, an essential in every home, the basis of a major new industry. He called them magic lamps, a phrase that stuck. He foresaw vast upheavals among the public utilities. He got statements of guarded interest from several scientists and cagy refusals to comment from various power company officials.

His story, sent out by one of the international news agencies, made the front page of most of the country's leading newspapers. It gave the initial impetus to Murray's business. It started a storm of debate among scientists, who were confronted by the reality of Arctolights but given no tangible clue to work on by the reticent Murray. There was an uproar among lighting and power companies. They made fabulous overtures to Murray, while their own scientists were busy in their own laboratories studying and analyzing these odd new bulbs.

Then began a strange game, a game that was partly a struggle for power by big business, and partly a scientific sleuthing. The purpose of both was to duplicate Murray's invention.

The companies tried to buy Murray's entire output in an effort to keep them off the market or to resell them at their own price. Murray refused to sell to middlemen, and prorated orders with a limit of two Arctolights per customer.

There was wild confusion in the stock markets. Shares of leading light and power companies slid off five and ten points at a transaction. Huge equities were wiped out overnight. Frantic traders and business men, in the first alarm following Cooke's feature story, forgot that Murray's lamp could supply illumination but not heat or power. Electric current would still be required for running the machinery of industry.

Stocks rallied, but well below their previous levels. If Murray had wanted to finance his company, he could have had millions for the asking, but the dark-haired, red-bearded giant was determined to fight his battle single-handed.

True to his promise, he kept lowering the price of Arctolights as output increased and as working capital and reserves reached safe large margins. He steadied at ten thousand lamps per day, and stabilized the retail price at a dollar per lamp. Later on, he promised to manufacture Arctolights different sizes, but for the present he clung to the one size.

The utilities slashed light and power rates lower than they had been within living memory, but still the orders flooded into Murray's offices. He did not need to spend a dime on advertising. The novelty of his discovery impressed every purchaser. Even without the benefit of Cooke's glowing feature article, word-of-mouth publicity would have put the invention across. The strange spectacle of steady illumination pouring from a mist-filled bulb which remained at room temperature, fascinated the public.

In addition, the magic lamps had certain convenient features. They could be moved around freely. They could be carried outdoors by night and served the place of flashlights. They cost nothing for upkeep or maintenance. So far as known, they were not dangerous and could not cause injuries. When broken, the vaporous content instantly dissipated.

Arctolights had made their appearance late in April. Early in May, a bribe was offered to one of Murray's staff. This initial attempt was succeeded by many others, and the bribes reached impressive figures. They were all rejected, for the excellent reason that only Murray knew what actually went into the bulbs.

Two attempts were made on his life. Murray caught the first would-be killer before much damage had been done and sent him to a prison hospital for three months. The second attack was more circumspect and seriously injured him with a bullet in the chest. Thereafter, he kept a bodyguard. He allowed no one, however, to enter his special workshop where he filled and sealed the Arctolights. His determination to keep that wonderful secret locked within his own head amounted to an obsession.

Cooke looked him up after the second attack. He went to the hospital where Murray was reported to have been taken and found to his amazement that the giant had been discharged on his own insistence the same night that he had been treated.

The reporter found him resting in his apartment above the workshops. The engineer's vitality was extraordinary. "It will take more than one measly bullet to stop me," he boomed. "Do I know who

attacked me? Sure, but I'm not telling. I can't be bothered. They'll never get another chance and half the battle's won already. Arctolights will be manufactured again within two days."

They were.

MAY waned into June and hot, sticky days began to make their appearance in New York City. The novelty of Arctolights had scarcely diminished. Thousands of apartments were lighted by their peculiar, soft irradiation. True, they had one basic disadvantage that Murray had not thought of, but which he speedily remedied. They furnished light that was not only constant, but too constant. They could not be turned off readily. Early purchasers solved the problem by various subterfuges such as putting the magic lamps in dark closets when the owners wanted to sleep. After the first few thousands, Murray distributed a black pasteboard cover with each bulb.

As June flowered into July, the powerful utility and financial interests won their initial victories. They forced "joker" laws through the legislatures of three States. The new laws required an accurate description of all electric, lighting, power, gas, and steam equipment and appliances to be filed with State power commissions. Murray fought for temporary restraining injunctions and won. He battled for permanent injunctions and lost. He fought the cases toward the supreme court but they never reached that austere body.

July sizzled into August, and Arctolights flowed in endless procession to all parts of the country. Controversy still raged in Sunday supplements, feature pages, trade journals, and scientific periodicals. Murray's failure to protect his discovery or invention brought frequent comment. Numerous experimenters sought the elusive secret, knowing full well that under the patent laws, Murray might be deprived of all rights and rewards if someone else filed an application before he did.

As August baked toward the cooler breezes of September, the war department suddenly became active. Under the patent laws, any invention that affected national defense could be taken over by the government. An order was issued for the confiscation of every Arctolight, while the postal officials and express agencies received instructions to segregate every parcel sent out by the Arctolight Trading Co.

FOR ONE WEEK, the order held. Murray issued a biting, blistering statement through the press. A howl of angry protest went up from the owners of Arctolights and from the public. There was a departmental investigation which hushed up an incipient scandal. Officials blandly explained that an overzealous minor clerk had issued the offending order. The "minor clerk" had received a sum in six figures from one of the nation's big electric lighting companies, but that interesting fact did not come out until long after.

September blew and blustered toward October, in between spells of deceptive Indian summer. The influential power interests had uncovered a number of significant facts by placing detectives on Murray's trail, investigating his previous life, and exposing every phase of his existence to a searching inquiry.

They learned that Murray had spent a year above the Arctic Circle, from which trip he had returned less than six months before his magic lamps appeared. He had taken along with him considerable equipment of an electrical, physical, or optical nature. His trip coincided with the maximum period of the sunspot cycle.

They found that Murray had been pursuing exhaustive researches into the mysterious field of cosmic radiations. They discovered that he ordered his bulbs from the Shatter-Pruf Glass Co., the wooden bases from another concern, the horseshoe magnets from still another, and that a chemical firm was selling him large amounts of krypton and argon.

Scientists of the utilities made progress in analyzing Arctolights. The magic lamps were not a vacuum type; or at least, if Murray did create a vacuum within them, he did so only to replace oxygen with a mixture of krypton and argon. His formula was not, however, chemically identifiable. That is to say, its spectrum showed nothing unusual, but the compound did not possess the precise atomic weight permissible by any conceivable proportion of krypton and argon. Since no other element could be proved present, the inference was that Murray was treating these rare gases by some process that turned them into isotopes, heavy argon and heavy krypton.

When placed under protective lead sheathing, the lamps continued to emit light, but highly sensitive photo-electric cells demonstrated that the light value was diminishing at a constant if micromillimetric rate. The results indicated that after two or three months the bulbs would cease to emit light.

The physicists carrying out the scientific sleuthing of the big utilities puzzled over this phenomenon for some time before anything like a tenable theory was advanced. The manifestations seemed contradictory. They appeared to show that the bulbs had a vital connection with cosmic radiation; and also that such radiation was not essential to their operation.

The analysts reached an astounding conclusion, the only conclusion that interpreted the facts. Arctolights not only utilized cosmic radiation and turned invisible energy into radiant energy. They also served as storage batteries, accumulating excess energy which continued to be released as light even after they were cut doff from the original source of energy. This hypothesis forced the further conclusion that Murray was literally packing the vast intra-atomic interstices with energy in an abnormal captive state.

The investigators removed the metal flanges outside the bulb to see what might happen. It happened. The bulbs instantly went dead, became mere glass shells inclosing fog. But there were attendant phenomena.

Precision instruments recorded the fact that invisible energy was still being released. And the bulbs began to grow warm. In two hours, the glass was hot and glowed red. It swiftly reached fluidity and melted, with a collapse of the bulb and release of the gases.

This sequence encouraged further speculation. Success of Arctolights depended on the magnetic field set up by the external magnet, a field that existed within the bulb. Removal of the magnet removed the field; then the stored-up energy passed from an unstable state of captivity to another unstable state of rapid dissipation in the form of heat.

The scientific hunters now had all parts of the puzzle except the key—what Murray did to argon and krypton to give them these strange properties. As the reconstruction stood, he modified the natural state of two elements into a combined unnatural state. He tapped cosmic radiation, probably of an electromagnetic nature, and stored it within the vast spaces between the infinitesimal components of atoms. The leakage seeped out as cold light. He created storage batteries of an inconceivably submicroscopic scale. And he set up a simple magnetic field that interacted with an unidentified cosmic or hyper-magnetic field.

At this stage, a firm of lawyers who declined to name their retainers approached Murray with an impressive proposition. If he would divulge his secret and surrender all claims and rights, he would receive the largest check in history.

Murray laughed. "Let them go ahead and make the same discovery," he taunted the agents. "I have no patent. If they succeed, well, I'll meet that problem when it comes. I've fought the power combine single-handed and made them come down off their high horse. That's worth more to me than the biggest check they could write by pooling all their resources. The public is with me and I'm with the public. The utilities be damned."

DAY AFTER DAY, the same number of Arctolights were shipped. The demand and orders far outstripped the supply. By the middle of October, Murray was two months behind on delivery, his small staff utterly unable to cope with the orders. At the end of October, dozens of physicists were still attempting to solve the secret of Arctolights. It is possible and probable that they would have succeeded in course of time if another circumstance had not intervened and ended the quest.

Throughout the month of October, there had been frequent displays of the Aurora Borealis. Murray became taciturn, moody, and increasingly brusque with his aids. He spent a good many hours staring at the night sky.

The month waned, and October 29th found him working late at night with other members of his staff. October 29th also saw an unparalleled display of Northern Lights. October 29th furthermore marked the end of a great enterprise conceived in ambitious dreams and concluded in wonder.

When dusk fell, Canadians witnessed the coruscating shift and play of the Aurora Borealis far to the north. Hour by hour, the flaming bands and streamers swept southward. The sky glowed with enigmatic

fires. Infinity clad itself in eerie raiment: Fluctuant colors rioted with cold, inexorable abandon. The sheeted tongues and falling curtains rippled farther. Cascades of marvelous hue radiated from the magnetic pole. The frosty fountains spilled out of the north and tumbled in dazzling variety southward. Before midnight, the vast, cosmic parade had reached proportions never before known. The whole of Continental North America was domed by a torrent of incredible flame; and far out to sea above the adjacent waters swept that apocalyptic deluge of ghostly and transitory glory.

From window and rooftop, from hill and street, watchers across the land viewed the mighty display. In silence and awe they witnessed the oblivion of stars and the many-colored ecstasy of illimitable space. It was almost as if a strange new life had come into being in alien beauty. The Northern Lights swelled and streamed and pulsed into an intolerable splendor like a symphony of gods. Lambent waterfalls sloped and plunged from colossal regions to ever-changing rivers of deepest violet to darkest red. The purple majesty of night succumbed to the surge of color staves projected against infinity upon the immeasurable cadences of the star-obliterated skies. This was the holocaust, this was Armageddon, wherein were rapture and awe in the hearts of those illuminated by a stupendous rampage of celestial forces.

From the burning heavens came messengers who sought their own. Destiny donned impalpable fingers. Phantasmal ribbons fluttered from oceans of light that raged mysterious. The sky crept down to earth in countless questing festoons. The air was stilled with the weird beauty of shadowy forms that drifted everywhere. Shapes of cold fire rippled and swirled along the ground.

Murray looked up and shielded his eyes as phosphorescent splendors burst into his workshop. There were little explosions. The mist in the, Arctolights danced with sudden eagerness. Rainbow hues flickered in blinding abandon where previously had been only soft white light. The burst of bulbs ticked off the freedom of captive energies. Fires sprang up where molten glass dribbled on combustible substances. The fires were pale in the presence of those departing incandescences.

When the gray dawn arrived, the magic lamps were only a memory, as intangible as the unearthly radiance that had taken their secret back beyond the Arctic Circle.