

I am going to violate that old rule about beginning at the beginning, because if I begin at the beginning, we'll all be back in the Venus Equilateral days—and until someone twists my arm for another Channing & Franks tablecloth engineering session, *The Complete Venus Equilateral* tells it all. But I don't mind telling you how it all began:

I'd been reading science fiction since Hugo Gernsback used to fill the center section of *Science & Invention* with a story or the episode of a serial every month. I graduated to *Amazing* when it arrived, and took up the old Clayton *Astounding* with equal pleasure.

Professionally, I'd worked my way upward from the day we all wound wire on oatmeal boxes and used a chunk of galena crystal as a detector to the point where I was designing what we'd call "entertainment" electronics; meaning radio receiving sets for home and household and the family automobile. And somewhere along about 1935, designing radio sets all day and then playing with radio as a hobby in the evening got to be just too damned much radio. I swapped a couple of bushel baskets of radio gear for a camera, which came in handy because I'd acquired, in the following order, one wife, one typewriter, and a daughter named Diane. When I wasn't taking my weekly pictures of my daughter and sloshing up the house with developer, hypo, and the rest, I'd try my hand on the old Woodstock. Because, you see, Doc Smith didn't write as much as I'd have liked, and John W. Campbell had become editor of *Astounding* with a firm clause in his contract NOT to write science fiction. For anybody, including himself. Ergo, someone had to write the science fiction I preferred, and it had to be me.

Meanwhile, back at the ranch, John W. Campbell was going through his way of living. I learned the process later, but I'm told with the highest authority that as far back as his college days, John took up concentrated hobbies and rode one until it fell to the ground, whereupon he abandoned it, climbed onto another hobby, and took off in another direction. He'd been trying to develop the fuel cell, and the house had been sloshed up with beakers of acid and alkali, and various salty messes. He swapped the fuel cell for photography, and the house became sloshed up with developer, hypo, and the rest. Then he'd met Harry Walton, one of the home workshop editors of *Popular Science* who occasionally tossed off a story for *Astounding*, and Harry got John interested in building things, taking pictures

of them, writing the article on how to build the-----, and John took up home electronics, somewhere about 1939 or 1940.

John's way of living was to get up in the morning, breakfast, catch the train to New York for work, come home, eat dinner, and then disappear into the workshop until it was time for bed. On the weekends, the only thing that changed was that John did not catch the train to New York.

Now, I said that I'd been toying with science fiction, but not very hard at the time. I was designing automobile radios for the Automobile Radio Laboratory of The Philco Corporation in their special design center in Detroit. It was a fairly good job, and all went well until the spring of 1941, when the special studies group designed a brand new automatic tuner. Everything had to be new, at least on the visual point, and the standard push-button radio had been around a long time. The interest was on floor control, with six pre-set stations on call in a sequence; one whiffled through the sequence by pushing a button on the floor and stopped when the station one wanted came on.

Unfortunately, this model didn't work; instead of staying put, each station-setting moved, with slow but alarming regularity toward the total high-end of the broadcast band where it stopped because it couldn't wander any further. We filled lab books with data, trying everything. I built a switch run from an old phonograph to click off the push-button routine: fifty times around the sequence in one minute, pause and measure how much each station-setting had drifted.

Studebaker and Chrysler had been sold and others were interested, and the Oak Manufacturing Co. had the basic tools built and were turning out tuners (that didn't work, but hardly their fault!) that were to go into production as soon as we got the bugs out. As a consequence, with a few million automobile sets awaiting a successful tuner, you can't rather quickly gather just how much time I had free to take a hard stab at writing science fiction. Very little, if you're not sure; and guess where we all were on that Sunday afternoon, 7 December 1941? Following the wandering turret tuner toward the high end of the broadcast band!

But things changed as soon as it was known that this war was not going to be a six-week pushover. The turret tuner died and left no address, and we began to get strange-looking equipment, designed as a functional prototype by government laboratories, to be reduced to mass production design.

Our lives changed, too. From the day of my first steady job in the first

lab, we'd worked regular overtime, with additional overtime when something came up with problems. When (I think it was the Labor Relations Board or its equivalent at the time, say 1939 or so) ruled that overtime work must be paid for unless the worker was a supervisor, we engineers were appointed to supervise mechanical draftsmen, each of whom supervised one model shop machinist, who didn't have to supervise anything because model shop mechanics belonged to a union that got paid overtime no matter what. But with government contracts coming in, there were government auditors who supervised the supervisors, and overtime work without pay other than "supper money" stopped. Further, they could hire more engineers and draftsmen, but at no greater pay than we regulars were getting, so it was economically sound to hire help instead of paying time and a half for overtime.

With time on my hands, I took my first real thrust at writing science fiction. I took off on one, double spaced and all, and finished it; a job that might go off today with science fiction's trend toward strange cultures on distant planets, but in 1941 it didn't work.

It came back—but not with a rejection slip. It came back with what I found to be the case: if John W. Campbell were interested (in anything!), one got a six-page letter, single spaced. This one said that he couldn't use the story I'd written, but he liked my style, and he had the firm notion that I had a technical background, and couldn't I write something that used my education and experience as a foundation.

The result was "QRM—Interplanetary." They paid me money for it. I've never been the same since.

And that is how the beginning began.

"QRM—Interplanetary" was purchased in the early spring of 1942, and appeared in the October, 1942 issue. Through that time, Philco closed the laboratory in Detroit, and we were given the offer of moving to Philadelphia or going elsewhere, and I had received an offer to operate as project engineer on one of the programs to develop the so-called "radar" proximity fuse, at the Crosley Corporation in Cincinnati.

Moving and getting settled into a new job kept me busy once more, especially since the program was a flat six-day week, eight hours each, on a job that took everything out of us, both physically and mentally, because by then it was known that this "six-weeks war" might go on for six years, and we'd been hurt so bad that the United States might come out second.

My writing lagged until Campbell wrote me another of his six-page letters, generally asking about his electronic home workshop, and suggesting that he was waiting for another story of the same kind I'd turned out before. Hoping, then, not to be hauled off before a firing squad, I took some liberties with what little was known about radar, and wrote "Calling the Empress." I got the check in Cincinnati in February 1943, on a cold, cold morning after an icy rain-hail storm. I opened the envelope as I hit the front steps—and the ice—and landed with two feet forward, both arms waving, on the bottom step—no, I mean with my ass on the bottom step. I don't know whether it was worth the check; I was once five feet eleven, since then I've been five feet nine.

Here, once more, came a change in my way of living. Since August or September of 1942, when the proximity fuse program began to shape up, there had been some haphazard scurrying back and forth between Cincinnati and Washington. Now, oh, about the spring of 1943, the haphazard scurrying was replaced by a schedule in which I was sent to Washington for a few days once each month.

Meanwhile, John's response to my reply to his letter was another letter, asking more about electronics, and from there the correspondence went absolutely wild. John found that he had a writer, and a tame electronic engineer, and late in 1943 it became expedient for me to arrange my monthly trip to Washington so that the conference closed on Friday night, and I made arrangements to return to Cincinnati on Monday morning in time for work.

It was on that first trip that I discovered John's way of life. I was promptly escorted into the cellar, where I played supervisor until I damned near missed my reservations to get me back to Cincinnati because they'd played that "double daylight saving time" process on the clocks for the war effort, but the railroads adamantly stayed on standard time.

That was my first sight of John W. Campbell. The stunt of making weekend reservations went on, neither the government nor the company cared very much how I spent my weekends, so long as two important points were kept. First, there were no expenses vouchered for whatever I did from Washington on Friday evening through Washington on Sunday night, when I picked up my reservation to arrive in Cincinnati on Monday. And second, both the government and the company knew where to find me all the time.

And so, once each month, I traveled to Washington, and on Saturday morning I was hauled into John's home workshop electronics laboratory

until it was time to be raced to transportation on Sunday night.

Once I hit Washington without a confirmed railroad reservation home. The Baltimore & Ohio railroad didn't have a place for me, so instead of leaving for New Jersey on Sunday evening I had to stay in John's basement until Wednesday. On Monday morning, I was hauled into John's basement workshop after confirming my position, and my lack of reservation, and the Campbell telephone number, while something called the War Reservation Board (or something like that) tried to pull strings to get me a bunk on a train.

At about 10:30 that Monday morning, I asked whether John was going in to Street & Smith. His reply:

"No. You see, I'm entertaining an author."

That baffled me. You see, I'm an engineer by profession, and I've always thought that way. My writing science fiction was an avocation, and even now when I'm retired, I'm a retired engineer who happens to have a talent for the typewriter, and can happily make a buck out of it.

"Author?"

John nods at me. "You, George."

Well, now, the word "author" is like the word "esquire." That is, bestowed by others but never used himself, like the word "mister." I'm George O. Smith, and I sign my name that way and answer the telephone that way, and one never calls himself "*Mister* Smith" unless one is being haughty. So the word "author" is reserved for fellows like Bill Shakespeare or Charlie Dickens. Fellows like Alex Dumas who wrote swords and sorcery are writers. And if I am asked about such as Winston Churchill or John F. Kennedy, my reply is that they are "politicians," and neither writers nor authors.

So I'm a writer, and I write because I like to write, and as I look back upon the past, I must say with cheer that I hope that my readers have had as much amusement as I have had fun in creating.

Late in 1943, the United States was on its way back from the drubbing it took on 7 December 1941. We weren't winning, but we were no longer on our back with all four feet in the air. While the production lines on the proximity fuse were running on three shifts, six days per week, the engineering part worked on improvements, building small quantities on a

pilot line for test-firings, and—with a great sigh of relief, the engineering department was put on the old five-day week. This, of course, cut my total pay, since everybody was getting one day of overtime on the six-day week.

That gave me more time to write, and since both John and the readers were yelling for more Venus Equilateral, that's what they got.

So here comes a bit of a slip-up in the chronology to the later days when I took off from Venus Equilateral to try something else.

Robert A Heinlein wrote "Lifeline" long before this. It was the story about the gentleman who built a time machine, looked forward himself, to find that he was to be killed by an automobile accident the following morning. After explaining his future to his friends and fellow-scientists, he calmly walked out on the street to meet his fate. Calmly, fatalistically; hope not, for there is no future, pray not, for there is no salvation.

But I am not a fatalist, but then no one has ever told me that I am to die precisely on tap, at what spot, and how. My opinion is that if there were any possible choice, I'd be in a slow oceanliner heading for Hawaii if my fate were death on Fifth Avenue by time machine fortune-telling.

John said that I'd pulled my punch, but that it couldn't be helped, but he bought it because of the gimmick of using time machinery as a manufacturing tool.

So—?

Blind Time

By George O. Smith

The man behind the large, polished desk nodded as Peter Wright entered. "Wright," he said, "the Oak Tool Works will require an adjuster. You're new in this office, but I've been given to understand that you have experience, are willing, intelligent, and observing. The Oak Tool Works has a special contract, and it is always taken care of by Mr. Delinge, who happens to be having a vacation in an inaccessible spot. Therefore, you will pinch-hit for him."

“I understand.”

The president of Inteplanetary Industrial Insurance nodded.

“Good,” he said. “You are to be at their Charles Street plant at eight o’clock tonight. They are to have an accident then.”

Peter Wright nodded. He turned to go, his head mulling over the myriad of questions used by the average insurance adjuster. The questions designed to uncover any possible fraud. Those designed to place the full blame of the mishap, to ascertain whether it was covered by the existing contract, to determine the exact and precise time of the accident.

“What?” he yelled, turning back to the executive.

The president of I.I.I. nodded wearily.

“I heard you right?” asked Peter incredulously.

Edwin Porter nodded.

“But look, sir. An accident, by definition, is an unforeseen incident, which by common usage has come to be accepted as misfortunate, although the term ‘accident’ may conceivably be applied to—”

“Wright, after you have been to the Oak Tool Works, you will become violently anti-semantic.”

“But look, sir. If this accident is forecast with certainty, why can’t it be averted?”

“Because it has happened already.”

“But you said eight o’clock.”

“I did,” said Porter. “And I mean it.”

“But... but it is now about three-thirty in the afternoon. At eight o’clock this evening there is to be an accident that has happened already. The Oak Tool Works is in this same time zone; they’re running on Central Standard Time, too. So far as I know, the Oak Tool Works is not manufacturing time machines, are they?”

Porter grinned despite his weariness. “No, Oak is not manufacturing time machines.”

“I am still in gross ignorance. If anybody is capable of truly predicting the future course of events, I would like to know it.”

basis of ten percent accuracy, he'd put the insurance companies out of business—until they hired him.”

“The future, in some senses, can be predicted,” said Porter.

“Only on a statistical basis,” answered Wright. “The prediction that tomorrow will arrive at precisely such and such an instant is a prediction based upon the statistical experience gained by several thousand years. So is the prediction of what will happen when sulphuric acid and potassium nitrate are mixed. But an accident, sir, is unpredictable by definition. Therefore, he who can predict an accident is a true prognosticator, who needs no statistical experience to bolster up his forecasting.”

“Wright, this argument gets nowhere. It, incidentally, is why Delinge always hands the Oaks contract. He knew, and there was never an argument. No, I'll tell you no more to Wright. You'll be incredulous anyway, until you've seen it in person. Eventually, you'll understand.”

“I doubt it,” replied Peter. “Seems to me that there are a couple of very obvious factors. One, if an accident can be predicted, it can also be avoided. Two, if such an accident is foreseen, and nothing is done about trying to avert it, then it is a matter of gross negligence, and the contract may be voided on those grounds.”

“With but one exception to your statements, I agree,” said Porter. “The accident that will take place at eight o'clock has already happened.”

“What you really mean is,” said Peter Wright, more by way of question than by statement, “is that the accident has occurred, but will not become evident until eight?”

“I'd hate to try to explain it in a few words. Let us try by analogy. A man atop of the mountain sees an avalanche start toward a railroad track. The avalanche takes out the train, preventing a meeting between two emissaries on a vital question. The vital question is settled, and two countries go to war. In the war, one country discovers a means of nullifying gravity, which after the war is used to start interplanetary travel. Several years after interplanetary travel starts, the rare metals are discovered in plenty, and the cost of shipping is such that the monetary system fails, and the system enters a trying period of depression. Now, could you, a man suffering because of the depression, go back and turn aside the avalanche?”

“No, but I fail to see the connection.”

“There isn't any, really. In that case the depression was due to a concatenation of events. In the case at the Oak Tool Works, the accident per se has already happened. The accident will happen at eight o'clock. You, Peter Wright, will witness the accident that will happen. You will make a suitable settlement.”

“Let’s hire the prognosticator,” suggested Wright.

“The laboratory is working full time on a means of utilizing the principle in our business. To date they are not successful. For me, I hope they are never successful. to the statistical experience, since true prognostication depends upon some sort of predestination, which, if true, makes a mockery of all effort.”

“All right,” grumbled Peter Wright. “I’m going. What sort of accident is... will it be

“Go prepared for anything from simple abrasion to loss of limb. I doubt the possibility of death, but—”

“I give up,” groaned Wright.

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“Where’s Delinge?” asked the man at Oak Tool Works.

“Vacationing on Mars, I believe.”

“No offense, young man. I’d prefer him only because he has experience in this. I have to spend some time in explaining to you, as a newcomer, just what really goes on

“What I’d like to know,” said Wright, “is some means of averting these predictable accidents.”

“We’ve tried. We’ve also failed.”

“Look, Mr. Simpkins, I’m of the legal profession. I am not too much of a scientist. I know about nothing regarding machinery—let alone the kind of plant that makes tools make tools. I took a course in mech, of course, and forgot it as soon as I made my grade

“Do you know what a blind rivet is?”

“Ah...er...one that can’t be seen from both sides?”

“Right. A sealed tank, for instance, usually has a manhole in it for the bucker. The bucker holds a bucking tool against the rivet while the riveter rams it over. Similarly, bolting structures together requires that a counterthrust or torque be applied to the nut or bolt on the other side. Unless the structure is equipped with tapped holes, which are expensive, a tank cannot be made with driller beams.”

“Driller beams?”

“An outgrowth of the war laboratory. What used to be called a Buck Rogers. Does not really disintegrate the metal, of course, but dissipates the binding energy between molecules and lets the metal float away in a molecular gas, driven by its own heat energy. The beams are sharply defined as to diameter and depth of penetration; you can set ‘em to a thousandth, though it takes cut and try methods to do it. We don’t really drill or cut metal any more. We beam-drill it and beam-cut it. It’s possible to set a screw-cutting beam, but tapping a three-quarter-inch hole is not for any construction company.”

“I follow.”

“Well, in setting blind screws and blind rivets, we have a method whereby the buckers need not crawl around on the inside. Actually, we don’t use a buckers any more. The rivet-setter does it all from one side.”

“I’ve heard of blind rivets.”

“This is not a self-setting rivet,” said Simpkins. “This is a real rivet-set system. Well, I’ll show you one.”

Simpkins snapped on the intercommunicator. “Ben? Look, Ben, we’ve got a new man from I. I. I. here who doesn’t know the ropes. Can you bring up a blindy?”

“Sure, but it will be dangerous.”

“I’ll have the signs posted.”

“OK,” answered Ben. “I’ll be up in a minute.”

“Look, have you got one that is about to reform?”

“I would get that kind anyway. No sense in tying up the corridor.”

“OK.”

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It was about a minute later, no more, when a knock came at the door. Simpkins called the knocker to enter. The door opened, and a man in overalls stuck his head in. There was a grin on his face and a smudge of grease on his nose. “Can’t, Joe,” he said. “You didn’t get the door open.”

“I couldn’t be going to forget that?”

Peter Wright swallowed. "Going to forget?" he gasped.

"Ben," said Simpkins in a very tired tone, "through the door glass, huh? Let's show this man what we're up against."

"Right."

Simpkins snapped the communicator. "Tony? Get a new glass for my office ready."

"How soon?"

"Within the hour."

"Right. I'll have it cut and waiting."

Peter shook his head, and then watched Ben enter with the riveting tool. He looked at it, and Ben, with a grin, held it up in front of Peter's nose.

There was a regular air ram with handle. That was standard. But the second air ram hitched in opposition alongside of the standard job was new. It projected out, its business end projecting in a caliper arc beyond the standard ram, and returning to buck the standard ram. With this tool, one man could both ram the rivet and buck it with the same tool, and since both hammer and anvil were driven, the effort was in opposition mechanically, and great effort would be required of the operator.

But the thing that stopped Peter Wright cold was the... the—

The missing link!

Several inches of the caliper were missing.

Ben nodded.

Peter reached forward gingerly and passed his fingers through the space. He felt the ends. They were microscopically smooth, true planes of cleavage. The far end, which acted as anvil for the main ram, was solid and immobile despite being separated from the framework by six inches of—nothing.

"You see," said Ben, "we need only a small port in the item we're building. For instance—" and Ben opened the closet door a crack, slid the far end inside, and then closed the door. He shoved forward and rapped the door panel with the main ram. Then he pulled back and—

Rapped the inside of the door panel with the hidden end.

“If we were riveting, now, we could slip in our rivet and pull the trigger. Follow?”

“I follow, but where’s the missing piece? What holds it that way?”

“The missing piece is coming,” said Ben, retrieving his instrument and sitting down.

“I.. .ah—” started Joe Simpkins, and then, taking Peter Wright’s arm in a viselike grip, pointed dramatically to his office door. “The wind,” he gasped.

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Wright shook his head. It was far too much for him. He was strictly out of his element, struggling madly to keep up. The door, he saw, was swinging shut, propelled by the wind. He recalled what they had said at the portal upon entry, something about the door should be open. With a shout and a leap, Peter raced for the door.

It slammed, and Peter grabbed for the knob.

Then the glass erupted in his face; in shards, it fell to the floor, and a metal piece came soaring through the air, through the glass, and circled the room. Peter’s jaw was clenched as he watched it flying about with no apparent plan. It poised for a minute before his chair where Ben had held up the blindy riveter for his inspection. In Peter’s imagination, he saw himself sitting there, passing his ghostly fingers through the spot where that piece of steel was now hung immobile. It headed for the closet, and Ben, watching, opened the door wide. The piece slid in, moved this way and that, rapped forward against nothing, and then rapped backwards toward the room—against nothing, and then floated rapidly toward the riveter and itself.

With precision, it approached the riveter. It came to rest easily, slipping into place with no shock, and the cleavage lines disappeared. The blindy was complete again.

“See?” said Simpkins.

“Yeah,” gulped Peter, weakly.

Laconically, a workman entered, cleaned up the glass on the floor, and started to replace the shattered panel.

“I see—but I don’t really believe it,” said Peter, flopping into his chair.

The two men laughed uproariously.

Ben sat down, and Simpkins started. “You see, the time field,” he said, by way of

explanation. "I haven't the vaguest notion of how it works or why. I admit it. But what do happen is that, during the workday, the missing sections of all blindy tools are stored in the tool room. At the end of the day, their respective tools are returned to the tool room, where they restore completely. About seven to eight o'clock, the midsections emerge from the tool room and go through the motions made by the entire tool, eventually following their ah... owners... back to the tool room, where they join. At this point, those tools required for the following day are placed in the temporal treater, and treated for whatever period of action is required."

"If it takes four hours for work, they're treated for four hours," put in Ben.

"And once the day's work is finished, the work itself must be moved, since where the tool fits across a barrier, now the missing piece occupies that same space. If it does not fit in the room, the man handling the tool several hours before will not be able to set his tool."

"Which was why I couldn't enter with the riveter," added Ben.

"It acts quite normally," said Simpkins, though with some doubt. "You couldn't bring the thing through a barrier if no time-difference exists. Actually, there is a temporal offset between the thing. It may pass through the same space at another time, but not at the same time."

"And you can't lick it," said Ben solemnly. "I purposely left the door open. But if I really left the door open, I'd have had no resistance in the first place—I found no trouble hooking it over the closet door—because when the mislink appeared, I opened the door. It does help, sometimes," grinned the shop foreman, "because we can tell when a piece of work is not going to be moved. Then it impedes the work."

"How do you know whether the impedance caused by not moving the work is responsible for the work not having been moved?" asked Simpkins wonderingly.

"I don't mind being on either horn of a dilemma," said Ben. "But I've yet to see the dilemma that I'd ride both horns simultaneously on."

"Urn, a bad animal, the dilemma," laughed Simpkins. "Well, Wright, I trust the demonstration was successful?"

"Successfully confusing," admitted the insurance adjuster. "I gather that the injured party got in the way of a missing link?"

"Whoever it will be was in the way of a mislink from a box-car crane."

"Bad, huh?"

"Could be—we'll know in a while."

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Ben lit a cigarette and said, "The box-car crane is a gadget made possible by the temporary treating. Prior to its use, they put heavy machinery into the box car by running to the door, a crane, and then they dropped it on a dolly and slid and levered it inside and in place. They have a crane with a mislink between the pulley block and the grab hook. They hook it on, lift it up, and slide it inside the car, suspended on the mislink that permits the roof of the car to intervene."

"And the victim fell afoul of one of these?"

Ben nodded.

"You're absolutely certain?"

"Of course not," he said. "A number of things might have caused the trouble. This is a boom-type crane. The mislinks are in the booms, and when it was swinging back from dropping a case inside, it hit something."

"Something? Can this be identified?"

"With a minor interference, we can feel it," said Simpkins. "With a mislink screwdriver, we can feel the interference. If it is hard, we know that someone has—or has dropped something in the way."

"And if it is soft, and moves, you can estimate it to be animal," added Ben.

"Can't you probe with a feeler of some sort?"

"We do—and did. There was a body on the ground after the accident."

"No identification possible?"

"None. Probing with a rod in the dark makes identification difficult. We've tried to make some sort of study, such as wearing a magnetic badge with a key-impression on its face—the magnetic to locate and the key to identify, but frankly," and Simpkins frowned deeply, "it's psychologically dangerous. The accident cannot be averted. After all, it has happened. And we tried it once, and the man who was hurt—well, knowing he was to be hurt, he went into a mental funk far worse than the accident."

"Why didn't you send him home or have him guarded carefully?"

"We tried, kept him guarded closely. Aside from putting him in an air-tight case, we

did about everything. When the accident occurred—well, he and his guards went to work the first time that the thing could be fooled.”

“It happened, all right,” said Simpkins. “First, another man caught a mislink on his shoulder, which laid him out slightly. That, we thought, was it! And if it was, the time-factor was all screwed up. But we all ran forward to measure, and as we did, our man got clipped with another. The first accident had gone unnoticed by the operator.”

“How can you tell that such an accident will happen?” asked Peter. “Seems to me that a hundred tons of crane might not notice a few pounds of human in its way.”

“We erect guard wires that register. That is for one reason only. We use it to surround the medicos and the hospital ambulance, and prepare for action. That’s about all we can do.”

“I wonder if you could take a picture of such?” suggested Peter.

“Huh?”

“Take a picture with a camera controlled by the operator— you know, temporal-traveler, the camera, film, and all but the range finder and the shutter release.”

“Look, fellow, that would take a picture of the accident as it happens, all right. It’s done. Makes excellent records. But as for pre-accident stuff, know what happens?”

“No, of course not.”

“Well,” smiled Ben, “you’ll, see. Anyway, the camera comes roaring out, is poised in midair, and is snapped. The timing isn’t too good, however. Well, you’ll see the camera come out and snap around the place when the accident happens. Remember this is no time travel, and you can’t go forward and take a picture and then come back.”

“For what good it does, we can tell about when a piece of goods will move by leaving a long-time mislink against it and waiting for it to fall.”

“Does electricity cross the gap?”

“Nope. Only force and motion. The television idea isn’t good either, young man.”

“Um, how did you know?” asked Peter.

“We go through this regular. You’re not the first that has been trying to avert accidents.”

“You understand that I represent I. I. I.?”

“Yes,” said Simpkins. “As such, it is your responsibility to do as much as possible to save your company money. That is your job.”

“Right. I still say that there is some means of averting the accident, somehow.”

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“Well, Ben, we’ve always claimed that we’d tried everything. But they didn’t try the electric light until Edison got the idea, and the airplane was a new science when they went to work on it. Young man,” said Simpkins, to Peter Wright, “you are a young man with a bright mind for legal intricacies. It usually makes little difference, so long as the mind is capable of handling the intricacies, just what the mind was specialized in. You are a fresh mind, and we’ve all seen fresh minds enter and lick a problem that stuck the original men for months. You think you can lick it?”

“I don’t know. It just seems to me that there must be some way.”

“Don’t forget,” said Ben, “that this is not much different from a regular problem. In construction, I mean. We have accidents where a man is hit by a flying grab hook that is in any way temporal-treated. Common accidents. The real problem, Peter, is to stop accidents. Not to try to avert them after they have happened.”

“But this one—”

“So far as the temporal treatment goes, is—or has happened.”

“Could you temporal-treat the stuff so the mislinks pass through first?”

“Sure,” laughed Ben. “Not practical. They have no forewarning then. They just go where the tools will go when used. We can’t tell when one of the men will try to grind a mislink chisel. As it is, we can clear the area where the tools have been.”

“Just remember that this is fact: For a one-hour mislink, we treat the tools for one hour. They are then ready for use for one hour. At the end of that time, the mislinks start to follow, and follow for one hour, at which time the temporal difference decreases on a fourth-power curve, and the mislink catches up with the tool and falls back into place.”

“Uh-huh. Well, I’m new at it, gentlemen, but it is my guess that this accident you anticipate need not happen.”

“You forget,” corrected Ben. “It’s happened.”

“Then where’s the body?” demanded Peter Wright.

“It... ah—”

“Has it really happened?”

“It will, with certainty.”

“Thus proving the utter futility of all effort?”

“Ah—”

“See?” laughed Peter.

* * * *

They left the office and proceeded into the factory. Here, where things should have been humming, all was at a standstill. Men sat on the benches and smoked nervously. They looked into one another’s eyes with that “Will it be me?” stare, and they worried visibly. An electrician who tinkered hourly with lethal voltages as his day’s work sat and chewed his fingernails. A machinist, sitting on the bedplate of a forming press large enough to stamp out an automobile body around the place where he sat, was biting his lips and looking through the opened door to the shipping platform. Men outside were working feverishly, but they were, however.

“Why?” asked Peter.

“They want to get done. They must get done so that the engine can remove the wreckage where the accident will happen.”

“Where is this scene?” asked Peter.

It was out on the loading platform. A mislink crane shunted large cases from the platform, swung around in an arc, and the missing section passed through the door, and the crane ran down the length of the car, dropping the case at the far end. The mislink crane returned, the far end reappeared, and another case was hooked to the boom. The operation was repeated. The cases were fitted in the box car with neatness and dispatch. The process continued until the cases diminished, and the box car was sealed as the crane went to work on the next car on the line. It took time, though, to fill each car, and the men working out here sweated visibly in fear, and partly from the hurried work.

They had little time to stare into one another’s faces and wonder which of them would be taking the brunt of the accident. As time wore along, the siren of the ambulance arriving caused some nervousness. The doctor and his corps of nurses came slowly forward,

inquired as to the scene, and proceeded to lay out a fairly well-equipped emergency operating set-up.

“I’m beginning to feel the morbidity of this,” said Peter. “The doctor, the ambulance driver, the insurance agent. We’re like a bunch of vultures awaiting the faltering step of the de-
wanderer.”

“A bunch of undertakers waiting for the accident to happen,” said Ben. “No, I’m not
calloused. I’m scared slightly green. I can’t take it unless I joke about it. It’s the uncertainty
certainty—the wondering just which one of us gets caught in the certain accident.”

“It seems uncanny to talk about the certainty of accident,” said Peter.

“The training at I. I. I. would instill a bit of the perfection of the statistical method
you,” nodded Simpkins. “By the time your statistical bureau gets all done checking the
chances of a new account, no one would bet against it. I. I. I. also puts the kiss of death
too. Just try to hire men for a plant that can’t be insured by your outfit. They’ll ask a thousand
credits a day.”

“What time is this affair going to happen?” asked Peter.

“Not too long. They’re about finished. Then they inert everything as usual, and we
retreat to the inside wall and wonder.”

“Why not all go home?”

“You can’t win,” said Ben solemnly. “We did all go home once.”

“And the accident happened anyway?”

“Certainly. A thief broke in and it clipped him. Just don’t forget that this isn’t a
probability, it’s certain. And the same mob instinct that makes people gather around an
injured man will keep the entire gang here, morbidly waiting to see who gets it in what way.
There is that element of wonder, too, you know. Every man in the place knows that someone
is going to get clipped with that crane. They’re all cagey and very careful. It will be an
accident despite planning, and therefore the unforeseen something will be out of the
ordinary.”

* * * *

“Quite a problem, Peter,” said Simpkins.

“I see it is.”

“A lot of this veiling is sheer psychiatry. We’ve consulted the best behavior specialists in the system. Keeping the fact secret is worse than permitting free knowledge according to them. But identifying the victim is far worse than to have everybody in a s tizzy.”

“Why?”

“Well, when it happens, we have a victim who realizes that part of the chance was and shock is not so great as it would be if no warning took place, in light of the management knowing all about it beforehand. On the other hand, all the men who were not hurt get a much uplift after it happens as their downswing of anticipation. On the third hand—part the numbers, Peter—if the victim were positively identified, the rest would be no better but the victim would be a mental case from then on, and shock would set in prior to the accident. Then we’d be likely to run up the casualty rate. Follow?”

“It seems like a hard row to hoe.”

“Well, usually we keep people out of danger areas. We know where they’ll be, of course. It’s these darned accidents that happen twice in time.”

“Twice in time?”

“Yes. The accident happens once invisibly, and once visibly. Once in the future controlled by the present, and then, as the future unfolds, it is an accident happening in present, controlled by the past. It’s blind time, and there is nothing we can do about it.”

“That fatalistic attitude again.”

“Well—”

Ben interrupted. “They’re stopping now.”

They turned to watch. The final box car was loaded, and the engine drew them away. The mislink crane returned for the final time, and was stowed on the platform. A hush fell over the crew, and the windows in the back were filled with faces, watching.

The silence was intense. Peter realized that practically every man was holding his breath, and yet it would be at least a half hour before the mislink began to follow the crew and some time after that before the mislink caught up to the scene of the accident.

He let his breath out with a sigh, and mentioned the fact to Ben and Simpkins. The foreman nodded and agreed, saying, “We know, but there isn’t one of us who won’t try to hold his breath for the next two hours.”

“Impractical,” muttered Peter Wright. “There must be a way.”

* * * *

The mislink was a husky section in its own right. The crane boom was no weakling. The rods, jointed on toggles, floated about ten inches from the main I-beam, just as long a temporal-treated section itself. It made an eerie sight, this monstrous slab of solid metal moving back and forth with determination and ~~with no~~ *with no visible means of support*. To add to the alien sight, the telltale rods maintained their ten-inch separation with a metallic rigidity, though no connection was visible to the main girder.

On the loading deck were three painted circles. The inner one was a four-inch strip of brilliant red. The circle approximated the scene of the accident. Outside of that by a considerable safety factor was an orange stripe, almost yellow. Another safety-factor distance away, the third stripe of green inclosed the area. As the mislink crossed the green stripe, all eyes fastened on it. As it crossed the yellow-orange stripe, the watchers tensed and as the mislink crossed into the danger section, there was a sudden, audible indrawn of breath, which was held solid until the mislink passed across the red line on the way. The out-go of breath was definitely audible.

The tension mounted. A large clock, set up for the case, swept around and around toward the estimated zero hour. The watchers no longer looked into one another's eyes when eyes met inadvertently, they both fell with a sickly smile that lacked courage.

Why were they there? Peter asked himself, and he knew. They were there because of morbid curiosity. The thing that made people watch three-hundred-foot dives into a large washtub of water; people watching a tightrope walker somersault on the wire above Niagara; watching the high trapeze artists performing with no net. That one of them was certain to be called into the act, the element of chance and the element of danger always a gamble, made them stay. With nothing to win, they stayed to watch, which is a basic characteristic of human nature.

They were there because they were human!

And when the accident came, the laws of the lines would be broken, though everything in every man's power would be done to maintain the safety. For the mislink stop, after the accident, just as the crane had been stopped automatically by the contact of the telltale rods in their temporal extension of the crane itself. The green line, across which no one must pass save the authorities, the yellow line across which only the medical crew may cross, and the red line across which only two men may cross and then only to take the victim to the medical set-up on the dock. Men would rush forward, crossing the lines, and the victim would be carried away with a trailing number of watchers. Then someone would have to forget the victim to keep the rest of the men from getting in the way of the mislink as it resumed operations. But, of course, no one else had been hit, so this, at least, would

successful, and the men were very confident that no matter what they did, they would hit.

The minutes wore on interminably. Coffee came in great tanks, and sandwiches stacks. The men ate in gulps, swallowing great lumps of unchewed food, and all court indigestion. The strain was terrific as the timing clock drew close to the minute.

Who— ?

* * * *

Then—came the zero minute.

There was an intake of breath as the clock chimed once, to mark the beginning of a period of probability. No man moved a muscle, yet all muscles were tense with expectation. Nervously, Ben felt in his pocket and took out a cigarette, stuck it into his mouth, and fumbled for a match. "Match?" he grumbled.

Simpkins fumbled and shook his head.

"Nope," he said, and his voice was loud and raw.

Peter felt in his pocket and found a match.

He lit one and held it over. His eyes were solid on the scene; he did not want to miss it.

"Look out!" someone cried in a strident voice.

The mislink was approaching the circles again.

Peter turned and faced the place squarely, casting an eye across the men's faces. They were all set, and in every man's body were muscles tensed against moving forward.

*How, asked Peter of his mind, can they expect anything to happen now?
Every man is psychologically unable to move forward.*

There came a stabbing pain, and Peter whirled with a wordless scream. The shoe was searing. Instantaneously, he whirled, hitting his upflinging elbow against the wall. The obstruction in motion set him off balance, and he automatically moved a foot to regain his footing. His foot hit the foot of Ben, who was standing solidly, partly turned, his face just changing from solid-set to one of surprise.

The solid foot tripped Peter, and he fell forward. He flung the still-burning match

his fingers as he put both hands forward to break his fall. The loading deck came up to him, and his forward-flung hands went down toward—

The red line!

There was a coruscating flare of stars, bars, and screaming color in his mind, which contracted to a pinpoint and then expanded to infinity, leaving only peaceful blackness.

He returned to consciousness in the ambulance, but his return was brief. He was conscious only long enough to hear:

“Some day we’ll lick it,” said Ben.

“Only when you lick the regular accident rate. The trouble is,” mused the medical attendant, “that people think there’s something about mislink accidents that is different, either predestiny or something that makes you able to change the future. Fact of the matter is, it is the past that they’re trying to change. Funny, to think of this guy getting it.”

“Last one got it by a different set of factors,” said Ben, “but you can’t stop an accident that’s already happened.”

Peter Wright, adjuster for the solar system’s greatest insurance company, Interplanetary Industrial Insurance, went under. His mind was whirling with a mixed desire to argue about temporal accidents, and the certain knowledge that he was in no position to mention the avoidance of same.