

The SPACE BENDER

By Edward L. Rementer

PART I.

The Fourth Dimension



HE disappearance of Professor Jason T. Livermore, the eminent scientist, was one of those unaccountable mysteries that could not be explained. There was nothing on which to base a theory; no fact on which to begin an investigation. He simply disappeared. That was all there was to it.

As his private secretary and pupil, Randolph S. Forbes was subjected to endless questioning from the professor's many friends in the scientific and social worlds. It was all to no purpose. He knew nothing and could tell nothing.

On the night preceding Livermore's disappearance, Forbes had accompanied him to a gathering at Newton Hall, where the scientist had made a brilliant speech on the possibility of parallel lines meeting if sufficiently prolonged. Afterwards they had driven directly to the professor's home and both had retired for the night.

In the morning it was found that Professor Livermore had disappeared without leaving the slightest trace. His bed was unused and everything else was in perfect order. There was no word—nothing. He had vanished like an extinguished light.

He never was seen again. The excitement caused by the total disappearance of so well known a man was intense, but time causes all to be forgotten. After a while public interest was transferred to an Indian Prince who was reputed to have five hundred wives. In reality the man belonged to a cult which prohibited marriage altogether.

Forbes was retained by Professor Livermore's successor, and affairs settled into their usual routine. Yet he could not entirely forget. Livermore had been a good employer and he had had the personality of one in a thousand. Although an excellent man and kindness itself, the new incumbent was hopelessly academic. He entirely lacked the giant mentality and breadth of vision of his distinguished predecessor.

LATE one stormy night, many years after Professor Livermore had vanished, Forbes, now a man well along in middle age, was sitting alone in his chambers—thinking. He had reached that medi-

tative mood on the borderland of sleep, when he was startled to hear the doorbell ring.

Opening the door, he saw a decent looking man of about fifty who, to judge from his general appearance, was some kind of high grade workman. Under his left arm he held a small package which he was at some pains to shield from the wind and rain.

"I want to see Mr. Forbes," he stated. "Mr. Randolph S. Forbes is the full name, I believe. He lives here, doesn't he?"

"I am Randolph S. Forbes," the secretary replied, at a loss to fathom his visitor's business. An idea of some new hold-up technique flashed through his mind, to be dispelled by the self-evident solid, middle-class respectability of his visitor. Just then a particularly vicious gust of wind almost blew the door from its hinges, dashing a cloud of rain into their faces. The requirements of ordinary courtesy asserted themselves.

"You had better step inside," Forbes advised. "This is a poor night for vestibule conversation."

"It is rather moist, to say the least," the stranger agreed with a pleasant smile that put at rest any lingering doubts about burglars. "I won't keep you long," he added.

The man laid his precious package on the table and unfastened the wrapping. Inside was an unusually thick necked bottle, made of some substance that looked like opaque glass. He continued:

"I am the foreman of the gang which is working on the new subway out in the Arlington district. Yesterday we dug up this queer-looking bottle. It has your name and address on it, so I told the super I would stop around and give it to you on my way home from the Union meeting tonight. Is it yours?"

Forbes took the bottle and examined it more closely. It was about the size and shape of a common milk

bottle, but where the cardboard cap should have been was a lid that apparently was screwed on. His own name and address was written on this lid.

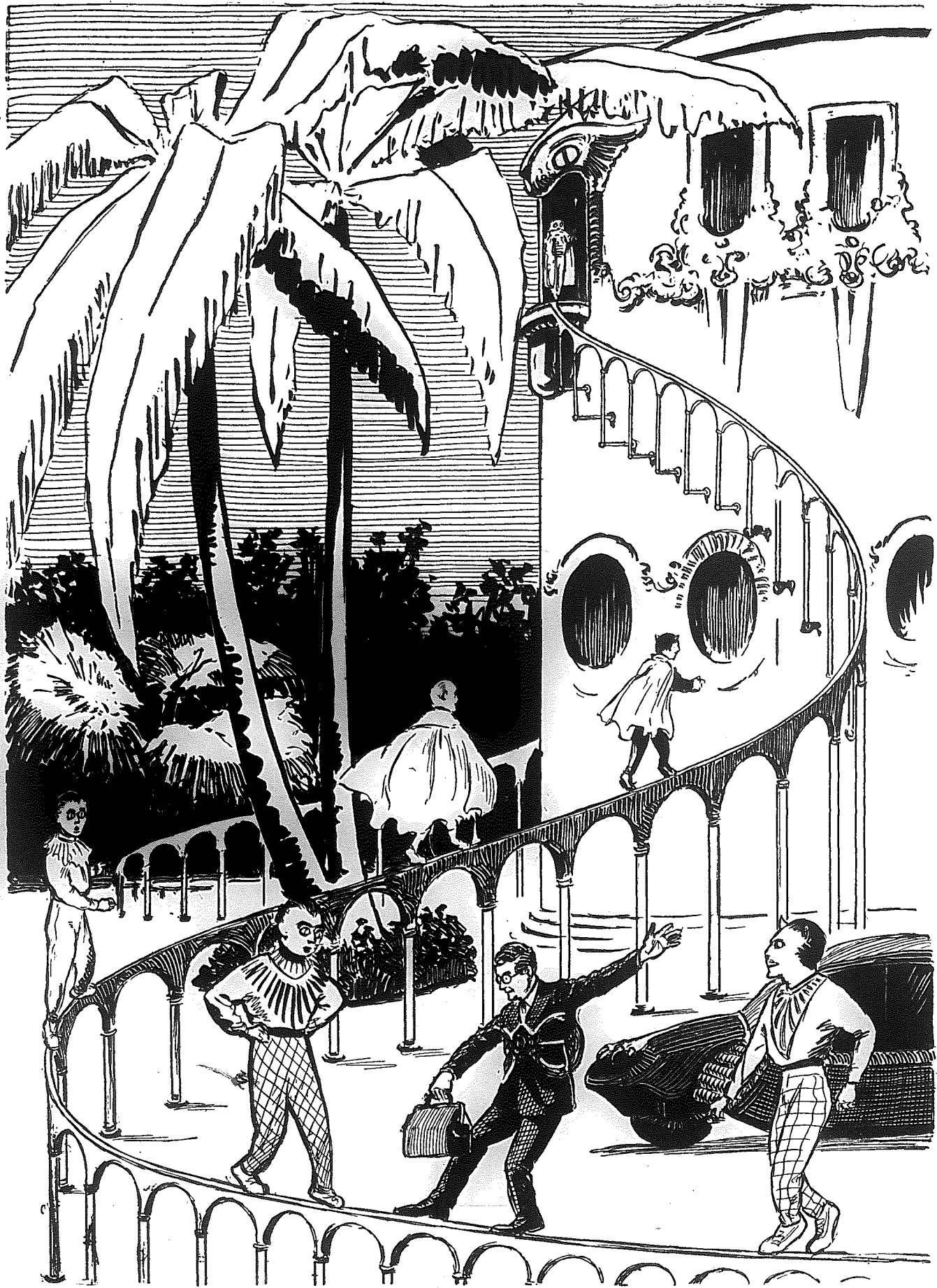
Forbes was interested in the material of the bottle, which was unlike anything he had ever seen before. It seemed to be glass, but was not brittle enough, for it bent slightly inwards under the pressure of his fingers. Also, it was far stronger than any glass in ordinary use, for, according to the foreman, the bottle had been struck directly with a pick and had not broken, as could be seen.

HERE is a capital story that you cannot help but enjoy hugely.

What, after all, is evolution, and what surprising form is it not likely to take? If you were ever at an aquarium and noticed some of the amazing and altogether inconceivable forms that marine life take on, not even the most grotesque form imaginable can prove surprising to you thereafter. Fish that carry their own light supply in their eyes; fish that carry their own saw; fish that have their own vacuum suction arrangement and dozens of others equally astounding, no longer phase us.

On the other hand, did you ever see a man with a typical face that looked like a fox; a man who looked like a pig, and still another man who had a bird-like appearance? Biologists tell us that all of this is inherited from the lower animals.

"The Space Bender" makes this clear to the nth degree.



To my consternation, my guides (I no longer regarded them as captors) hesitated not a moment, but proceeded to mount the giddy way with the utmost unconcern. I hung back. They motioned for me to come on, evidently entirely failing to understand the cause of my reluctance.

By this time Forbes was interested almost to the point of excitement. What could it be? Who had addressed it to him and then buried it several feet underground? A thought struck him. Perhaps it was a practical joke played by some of the college football team, with most of whom the agreeably mannered secretary was on good terms.

If that were the game, they should not have the satisfaction of having their emissary witness the consummation of their pleasantry—not if he could help it. He gave the man some cock and bull story which was accepted without comment, thanked him for delivering the thing and, slipping him something a little more substantial than thanks, got rid of him.

As soon as he had gone, Forbes tried to unscrew the cap, but could not budge it, although he exerted all his strength. He was about to resort to a hammer and chisel (although what use a chisel would have been on a substance like glass, that was as tough as India rubber, is difficult to imagine) when the happy expedient of trying it left-handed occurred to him. To his surprise, the cap came off without any trouble. Inside was a quantity of closely written manuscript. The idea of a joke grew stronger.

"Ha! Ha!" he laughed, jesting with himself. "The manuscript found in a bottle, eh? By Edgar Allan Poe, alias Tom, Dick or Harry of the football team. A clue to Captain Kidd's treasure, no doubt. All right, boys. If you can go to the trouble of writing all that stuff and making a left-handed milk bottle out of the Lord knows what for the sake of a practical joke on me, I'm game enough to see it through. So here goes!"

He took out the manuscript, half expecting to find it a copy of Caesar's Gallic War or something of the sort, glanced carelessly at it and dropped his pipe in completely dumbfounded amazement.

Here was no joke. He knew that writing. There was no possibility of a mistake. Too often had he copied pages of it, correcting spelling and grammar, with which details the writer never bothered—that, he told his secretary, was his job. It was the writing of the vanished scientist, Professor Jason T. Livermore!

Trembling with excitement, Forbes smoothed out the pages with shaking fingers. The writing was on some kind of white substance, the nature of which he could not determine. It was like paper, but thinner, more delicate. The ink, too, was different from any ink with which he was familiar. It was a beautiful shade of faint purple that seemed to glitter and gleam with some interior luster. For some unaccountable reason, Forbes thought of his pet cat. Glancing down, he saw old Archibald, as he called the creature, looking at him with an intent stare.

Paying no further attention to Archibald, who made a couple of dignified noises and disappeared, he rapidly skimmed through portions of the manuscript and felt his eyeballs literally starting from their sockets with stark, unadulterated wonder. Sinking into the most convenient chair, he automatically lighted his pipe and read, and read, and read.

Never before, since the world began, had anyone come

across such a tale as lay before his wondering eyes! What the world would say, he knew not. Nor did he care. He, at least, believed. Professor Jason T. Livermore was the very type and soul of the cautious scientist who meticulously verifies every conclusion by the most detailed investigation and experiment. It was not in the man to perpetrate such an elaborate hoax, particularly a hoax without any conceivable motive.

No—let the crowd say what it would; Forbes believed. Of doubters he would ask two questions: First, where was Professor Livermore? Second, of what substances were the bottle and manuscript composed? When these were answered, perhaps he would be skeptical. Until then, he would believe!

This is the story as recorded on the manuscript by Professor Jason T. Livermore:

"AS you know, I have always been particularly interested in the rather fantastical subject of the fourth dimension. To my mind, the possibility of a fourth dimension has opened a field for scientific investigation, where results might be obtained beyond our wildest dreams.

"The theory that *time* was the fourth dimension, however, was something I could not accept. This involved the corollary that it was possible to travel in time the same as in any other dimension. I hold such a feat to be impossible because time does not exist!

"All arguments relative to time traveling seemed to me to rest on a fallacy. This is the belief that things exist, even for the fractional part of a second, in a state of rest. They do not. Everything is in a state of flux. Change is eternal. It is just this change that we call life.

"Time merely measures the *duration* of existence. It has no entity apart from the thing existing. A child is born. When it has lived one year it has gone through certain processes of growth, which took place while the earth completed its orbit around the sun. While the child undoubtedly did and does exist, it is impossible to point to any particular moment and say, 'Now! This is the time the child exists!' In the very act of selecting the moment, *that* moment has become the past. Growth or change has proceeded and a child, different to the extent of such growth or change, now exists.

"Time is simply a measure of the processes of life, the same as a foot is a measure of length. Who ever heard of a 'foot long' apart from something that is a foot long? We have marked on a rule a division we call a foot. When a piece of string is a 'foot long,' we mean it has the same extension in length as the division on the rule we call a foot and to which we compare it.

"In the same way, when a child is a 'year old,' we mean it has completed certain biological functions while the earth was completing certain orbital movements to which we compare it. The term, 'a year long,' apart from the entity functioning during that period, has no more being than the term, 'a foot long' has apart from the thing possessing that extension in space."

Forbes paused for breath. This was certainly pretty

stiff reading. Rather dubiously he thought, if the rest of the manuscript continued in that vein, he stood an excellent chance of being in the lunatic asylum by the time he got through. He did have a hazy notion of what Livermore meant, though. Although he was not a famous scientist like his former chief, Forbes was by no means a fool. He possessed a very clear and logical mind. He summed it up, walking about the room and checking the points on his fingers.

Time could not be a dimension. One can move about in a dimension. To travel in time one must assume a whole series of events, past, present and future, all going on at once.

A novel idea came into his mind. It was so grotesque, it caused him to smile. He could put all his money out at interest, travel a hundred years into the future, collect the fortune and return to the present, a rich man.

Or, he could go backwards into the past, give himself good advice as to how he should avoid mistakes he had made and so grow up to be a different man but—then there would be *two* of him at present instead of one! No, no—the thing was too absurd. Livermore was right. Time was not the fourth dimension.

He relighted his faithful pipe, assisted Archibald, who had reappeared, to a strategic position on his knee, and went on with his reading.

"From the above," the manuscript continued, "it is easy to see that abstract terms of all kinds are really meaningless. Concrete things exist and have being, possessing the special qualities proper to their particular form of existence, but the qualities in themselves do not and cannot exist apart from the object of which they are attributes." It went on:

"LEAVING out of consideration the ether with which our present argument is not concerned, space is nothing. It is the absence of something. Hence, paradoxical as it may seem, space does exist, as a mental concept, simply by being nothing!

"To make my meaning clear, try to think of the color red without thinking of some object that is red. You can't do it. But you can easily think of space without anything in that space. In fact, so soon as you put something in space, that particular part of space ceases to be space just because there is something there.

"Therefore it is possible to travel, to move about freely in space. We know of three basic ways in which we can move, each of them at right angles to another:

"(a) Forwards and backwards, or *length*, (b) sideways, or *breadth*, and (c) up and down, or *depth*. In other words, space, as we know it, permits objects to move in three dimensions or combinations of the same. There is no reason to suppose, however, that other beings, differently constituted, may not know a space allowing other dimensions—four, by way of example. It is not a question of the attributes of space. Space has no attributes, being the absence of attributes. It is a question of the faculties for perception of the beings inhabiting space.

"Assume a two dimensional world. A universe in

which people have a knowledge of length and breadth, but no knowledge of the third dimension, depth. Such a world would be the surface of a map. The inhabitants of our hypothetical mapworld would move about on the surface of the map much as a block of wood floating just awash in a tub of water would move about.

"They would live in or on the surface of the map which would be *their space*. Their range of vision would be forwards, backwards and sideways, but never up or down. They would have no knowledge of up or down, which requires a third dimension. To them, the third dimension would not exist any more than the fourth dimension exists for us. However, it would be there, just the same, exactly as the fourth dimension may exist in spite of the fact that we know nothing about it.

"Suppose the map were produced upon the surface of a globe. It would then be in a three dimensional world, but the inhabitants of mapworld, looking *along* rather than *out of* their two dimensional space, would never know it. Their space would still appear to be flat, to have only two dimensions.

"It would be an axiom of the geometry of the mapworld that parallel lines could not meet. Yet if two mapworld professors should travel sufficiently far along two of their supposed parallel lines known as meridians of longitude, they would find they *did* meet at the poles. If they were not blockheads, this fact would prove the existence of a third dimension.

"Certain experiments disclosed that some of our apparently parallel lines, if sufficiently prolonged in our three dimensional space, showed a tendency to come together. This indicated the existence of a fourth dimension.

"I set myself to work to prove it. By a series of experiments dealing with the speed of light and a number of other things, I reached a point where I was obliged to accept the existence of another dimension, at right angles to the ordinary three dimensions. This was the much talked of 'fourth dimension.'

"All that was required was the ability to see it, to experience it, and—to get into it. Yes, to get into it, for I made up my mind to devote my life, if necessary, to perfecting a machine, of which I already had the rough idea, that would project me out of our universe into the fourth dimension!

"You must not think that this idea is as fantastic as it seems. I had no intention of trying to remain in a universe of four dimensions for any length of time. I knew well enough such an attempt would mean my death.

"If you will stop to consider for a moment, you will see this inevitably would be the case. Let us return to our analogy of mapworld. To one of these people a square, for instance, would not look like what we call a square. Looking straight ahead or to either side, all they could see would be two of the boundaries of the square or two lines vanishing into the distance at an angle.

"To us, however, a square is an entirely different thing. Looking *down* upon it, we see an area of surface inclosed by four straight lines. We see the *inside*

of it. A square viewed in a three dimensional world is so utterly different from a square viewed in a two dimensional world that it is not the same thing at all. From the mapworlders view, it is not a square at all.

"In the same way, if I succeeded in transporting myself into the fourth dimension, a cube would be as different from what we call a cube, as a square, viewed from three dimensions, would be different from what our two dimensional friends would call a square. It wouldn't be a cube. It would be something else.

"So with everything. A four-dimensional world would be so far removed from anything which the five senses of humanity are capable of appreciating, that the functions of the human body—made for use in a world of three dimensions—would cease, and death would result.

"It was my purpose to enter the fourth dimension but to return to the normal world of three dimensions before the merest fraction of time had elapsed. In this way, I hoped to be able to survive, just as it is possible to step quickly through a room full of poison gas without being killed. Also I should take the extra precaution of drugging myself into a state of insensibility to avoid the terrific sensations attendant upon entry into a world not made for men.

"No doubt you will wonder what use the experiment would be if it were to last only a second, especially since I should be unable to see anything even for that second? So far as the fourth dimension was concerned, it would be no use at all. The fourth dimension was not what I intended to investigate. It admitted of no investigation by humanity. My plan was to make use of the fourth dimension to travel distances in the third dimension, which were otherwise impossible to man. In short, I had made up my mind to go to the planet Venus!

THERE were several reasons why I selected Venus as the object of my stupendous journey. The conditions likely to be found on that planet closely resembled those on this earth. The size of Venus (its diameter is about 7,700 miles) is very nearly that of the earth, while its mass and density bear the respective relations of .82 and .94 to those of the earth. These facts were of great importance.

"If I went to a heavenly body much less than the earth in size, mass and density, my weight would be so much reduced that walking about would consist of a series of gigantic leaps and bounds, which it is doubtful if an organism, constituted as yours and mine are, could survive, even allowing that the shock of alighting would be correspondingly lessened.

"On the other hand, to visit a planet possessing the opposite characteristics, might increase my weight so that I could scarcely move at all. Under these conditions, my bony framework would probably be unable to support my flesh and I should fall apart.

"Furthermore, it was reasonably certain that Venus possessed an atmosphere which would support life, which was a necessary requirement. There were two things, however, that gave rise to serious doubts. Venus, at its mean distance from the sun, is 27,000,000

miles nearer that luminary than is the earth, so that a temperature considerably hotter than any to which I was accustomed, might be encountered.

"On the other hand, some astronomers held that the inclination of the axis of Venus would produce a winter correspondingly dangerous at the other extreme.

"The highest temperature ever recorded on earth was 134 degrees Fahrenheit, at Death Valley, U. S. A., while the lowest temperature on record was 90.4 degrees below zero, Fahrenheit, in Siberia.

"Human life is a very delicate organization, adapted to this earth. I did not expect to live in a temperature much outside of these limits. I dismally reflected. The question was—should I be roasted or frozen to death? Well—I must take the chance, just as other pioneers had done before me.

"The distance of the planet from the earth made no difference. By the method I proposed to employ, all distances were alike. This was literally to *bend* our three dimensional space, during the second I should be in the fourth dimension, so that the planet Venus and the earth would touch. Not touch in three dimensional space, you understand, but touch in four dimensional space. Then, while the planets were in juxtaposition, my fourth dimensional machine would roll me, totally unconscious, from the earth to Venus!

"Most likely you will consider this to be the ravings of a madman. I assure you, however, I was far from insane. Theoretically, the thing was quite possible and I was willing to stake my life (which, of course, I was doing) that it was also possible practically.

"Again consider mapworld—a map of the United States, for instance. On such a map, New York and San Francisco are represented as approximately three thousand miles apart. Any creature traveling along the surface of the map must travel the entire distance to get from one city to the other. This in two dimensions, the only dimensions of which our mapworld folks have any knowledge. Nevertheless, you and I, being in the third dimension, could readily grasp either end of the map and *bend* it into a position roughly approximating a half cylinder, so that the two cities touch.

"Furthermore, the inhabitants of the map, to which they would be bound by the laws conditioning their two dimensional being, would not know the map had been bent. As explained before, the map would still appear flat and they would crawl about in their two dimensional world entirely unaware that their space—the map—had been moved through the third dimension. They might be rather amazed to find themselves transported from New York to San Francisco in an instant, but they could have no understanding of how they got there.

"My machine, which I actually perfected, after months of experiment, sleepless nights of unremitting toil when failure seemed all that I could expect, would, I believed, when set in motion, project itself into the fourth dimension, take hold of our three dimensional space, and *bend* it until this earth and the planet Venus met.

"I cannot give you an accurate and detailed exposition of the machine, which I named *The Space Bender*, because, frankly, my dear fellow, you would not understand me if I did. Besides, the discovery is mine. I alone conceived it, thought it out, planned it, made it. I do not intend to share the secret with anyone, not even you, old chap, until I feel so disposed.

"The physical appearance of *The Space Bender* was unique and interesting. It was made of a new metal I invented, resembling copper, but much harder, and having a gloss and smoothness greater than copper. I obtained it by subjecting—but there! I said I would not reveal the secret and I won't!

"In general, it looked like a large, ill-shaped pair of tongs having two sets of grasping implements, one on each end, with the handle in the middle. There were certain dials, like the dials on an ordinary radio receiving set, which enabled me to measure the exact degree of 'bend' I desired. These were what I may term my 'range finders.' By their control, it was possible to make the proper angle of bend to touch Venus instead of some other stellar body. It was furnished with a little lever by which the apparatus could be set in motion. One set of 'tongs' would bend three dimensional space. The other set would be fastened around my body to push me through the fourth dimension from the earth to Venus.

"So much for the machine. Everything was ready by the night of the meeting at Newton Hall. My plans had been perfected; my arrangements made. I awaited the adventure. So soon as I left you, I went from my room to the laboratory, packed a small gripsack with a number of useful articles, including a good automatic, throwing an explosive bullet. This was certainly advisable. Who could tell what fearful creatures I might encounter before I got back to earth again?

"I fastened the machine around my body, set the dials at the proper positions, took a large dose of morphine and, with my hand on the switch, waited for the drug to take effect.

"I knew that I faced death. It was quite possible that I would never reach Venus; that I would be instantly killed when I set the machine in operation. Even if I did reach my goal and actually did arrive on the planet Venus, would I be any better off? What monsters might I not find there, what terrors, what horrors undreamed of by terrestrial man? How did I know what was there? Perhaps there would be beasts to whom my explosive bullets would merely be irritating flea bites!

"In spite of all this, I was calm and collected. I had taken no one into my confidence. I wished to avoid becoming the butt of ridicule, if I failed. I knew what I was doing and was prepared to go through with it. I was sustained by the support that has upheld countless martyrs through untold tortures throughout the ages—the desire for knowledge, the thirst for truth!

"Ha! I nearly fell asleep then! The morphine was working! I must throw the switch. No—what's the use? It's too much work. I'll just drift off to sleep—to sleep—to . . .

"This would never do. With a tremendous effort

I roused myself, reached out thousands of miles and turned the switch.

"A blinding flash of rose-colored light overwhelmed me. I felt light as air; my soul soared out, up, onwards. . . . My whole being seemed to be aflame, burning. A terrible sickness seized me. My very bones were racked and tormented. It did not seem that I could bear the frightful anguish! With a last excruciating hell of agony the rose-colored flame burst into a million bubbles of living, pulsing fire—and vanished! Utter, complete blackness came upon me. I ceased to feel, to think, to be! It was the end."

PART II.

Venus

"I WAS awakened by a warm, gentle rain falling on my face. For a time I made no effort to collect my senses, but lay, with eyes closed, pleasantly inert, enjoying to the full a delicious sense of contentment and languor.

"Gradually it dawned upon me there was something I ought to do or remember. It tormented me, persisting in spite of all efforts to drive it from my thoughts. I was extremely hot. The atmosphere was like that in a greenhouse, humid, sickening, overpowering. I did not open my eyes, but continued to lie in a kind of stupor, the perspiration running from every pore.

"As fast as I would drowse off, the idea of something neglected would prod me into consciousness. Curse it! Couldn't a man even take a nap without being annoyed in this way? What could it be that I ought to do? Something, there was—something important. But try as I would in my half-somnolent condition, I was unable to recall the circumstance.

"The rain, which continued to fall with a mild insistence, made me think of water—rivers—boats—gondolas—Italians—Venice—ye gods! It dawned upon me. The thing I was trying to remember was that at this very minute, if my foolhardy experiment had succeeded, I was no longer on good old mother earth, I was on the planet Venus, millions, yes millions of miles away from home, friends and all that I held dear!

"Of course, with *The Space Bender* in my possession, it would be just as easy to return to the earth from Venus as to go to Venus from the earth, but—all this would take time. I should have to go carefully over the apparatus to see that it was in perfect working condition before again venturing on a journey through the fourth dimension. So, for the time being, I was isolated on the planet Venus without hope of aid or protection from whatever dangers might surround me, other than that afforded by my own efforts.

"Bosh!" I thought. "The planet Venus indeed! What nonsense! Probably the wonderful experiment, instead of opening a new world to mankind, had been an absurd failure. No doubt at present I was lying on the laboratory floor with a broken water pipe squirting in my face! By this time I was fully awake. I opened my eyes and looked about.

"Something had happened, at any rate. Wherever

I was, I was no longer in the laboratory. I was lying in a little glade, near a rather swiftly flowing river of muddy looking water. Tall grass grew all about me, but not thickly enough to obstruct the vision entirely. At once I noticed a most unusual peculiarity about this grass. It was yellow. Not the seared, dead yellow of autumn, but a bright, fresh yellow, denoting the strength and vigor of growing youth. Nearby were some large, bright blue blossoms that made me think of peonies, although I had never before seen blue ones. They had a strange odor, which I was unable to place at first, but which I later associated with catnip.

"I realized that my amazing adventure really had succeeded and that actually I was on the planet Venus. While terribly excited, as you may imagine, I was not inclined to any grandiloquent theatricals about the "first man" and all that goes with that sort of thing. No. My situation was entirely too uncertain and acute to permit of any posing to myself or to anyone else—if there were anyone else. It behooved me to go slowly and keep a wary eye.

"Feeling unusually thirsty, most likely the after effects of the drug, I got out my collapsible drinking cup and dipped a generous portion from the nearby stream. It was disagreeably warm; in fact, it was almost steaming, but it answered the purpose. It was water.

"It had stopped raining. Glancing up, I saw a sodden sky through which the sun was trying to peep. In front of me was a field of yellow grass, in which some rather large animals were quietly feeding on enormous white mushrooms. I hid behind a convenient hillock and, as you may well believe, gave the creatures a pretty close scrutiny. I had never seen anything like them. They were about the size of sheep, but there the resemblance ended, for these beasts, whatever they were, looked exactly like gigantic mice. They did not appear to be savage; and, to judge from the fact that they were browsing off some kind of vegetable growth, they were not carnivorous either. It would not do to be too sure, however.

"The sun came out brightly, dissipating the remaining vestiges of storm. Suddenly, without any warning sound whatever, a man—at least he appeared to be human—stepped directly in front of me from a neighboring thicket and stood regarding me intently with an emotionless stare. I did not understand how he could have moved so silently through the long grass, but he gave me little time for speculation.

"With a spring of lightning-like quickness, he leaped upon me, bore me to the ground with an ease denoting tremendous strength, and swiftly bound me, so that I was unable to move hand or foot. He then stood quietly contemplating me for a short while, during which time you may well believe that I observed him! Apparently having satisfied his curiosity, he turned and walked rapidly away, without so much as a backward glance.

"Despite my terrible fear as to what fate was in store for me, I could not but be interested in my captor's personal appearance. In general outline he was the same as I, myself. In other words, this inhabi-

tant of another planet was human. Of that there was no doubt. His figure, however, was more sinuous, more lithesome than any physique possessed by earthly man. There was a certain innate grace and dignity in his carriage which contrasted detrimentally to our jerky, spasmodic walking.

"His features were most peculiar. His forehead, while fully broad enough to vouch for an excellent mentality, nevertheless was flatter and more receding than ours. His ears were slightly triangular and, most remarkable of all, they were pitched or slanted forward. The nose was short, straight as an arrow, and the nostrils were expanded and open.

"I did not like the fellow's eyes. They were a beautiful yellow, tinted with green, but were close together and had a lurking glitter that gave an uncomfortable impression of merciless cruelty. To sum up; while the man was undeniably handsome, his good looks were of that sinister beauty one associates with—cats! That was it; he made me think of a cat.

"MY interesting, but certainly fearful reflections, were interrupted by the man's return. This time he was accompanied by several other similar individuals, under the direction of an elderly person, dressed in a gorgeous yellow and black striped cloak, who seemed to be in command. I was partially unbound and pushed forward in a manner that clearly indicated I was to accompany my captors.

"I was perforce obliged to obey. Indeed, I wished to go with them. I had come these millions of miles to see what was to be seen. They permitted me to retain *The Space Bender*. Why should I hesitate?

"We entered a closed car, like our sedans, although the coloring would have excited lively interest on Broadway. It was black and white, in irregular daubs or splotches, the same as some black and white cats are marked. In place of the little image usually found on our radiator caps was a representation of an outspread claw. The talons were about five inches long, curved and sharply pointed. Of course the thing was only a metal decoration, but the workmanship was amazingly clever and produced an extremely realistic impression. In conjunction with my position, as the lone representative of another world and the cat-like appearance of these people, the claw gave me a devilishly uncomfortable feeling.

"They started the car in much the same way we start an auto, by shifting a number of levers or gears. It was very noticeable that the horrible racket, sometimes incident to our starting a car, was entirely lacking. I may mention here that this people hated and detested all noise. Their earnest efforts had been devoted to the elimination of all sound. Instead of horns, bells, whistles and the like—contrivances intended to produce sound of one kind or another—they had machines cunningly devised to prevent all vibrations that might affect the hearing. I found this out later, of course. At the time, though, I was merely struck by the silent smoothness with which the car started and ran.

"We proceeded at a moderate pace along an excel-

lent road toward what I took to be a distant city. As we rode along, my guards conversed in low, beautifully modulated, contralto voices utterly unlike the raucous grunts and shrieks of human speech. The language was wondrously melodious. It seemed to be all vowels, with the addition of some extra ones unknown on earth. Heard by anyone who does not understand it, our language would, no doubt, sound like the chatter of apes. To me, the language of this people closely approximated the purring of well-bred, refined cats.

"I began to be less afraid. Clearly, I was in the hands of rational beings; human beings just as much as you or I. They had no reason to harm me; I had injured them in no way and I could not see why they should wish to do me ill. Furthermore, they appeared extremely interested in me, evidently regarding me as a subject for scientific investigation and study.

"Their deportment to me was most kind and considerate. Their manners to one another were excellent. Each occupant of the sedan (I call it that for want of a better name) sat in his own place, attending to his own business, except when taking part in the conversation. No one interrupted or broke in on the speech of another. As a result, there was an entire absence of the confusion and tumult that would have characterized a similar scene on earth. My scientific training began to dominate my alarm. I really began to enjoy myself.

"We entered the city. The streets were broad, spacious and well paved. The material was a kind of cement that had been treated in a way to deaden all sound. We rolled sedately on, between large, commodious houses surrounded by well-kept gardens of the prevailing yellow hue, which by this time I had learned to accept as common to the vegetable life of Venus. It hurt my eyes. One of the men, noticing that I blinked, gave me a pair of glasses, which deadened the glare without destroying the ability to see colors. I wore these for the rest of my sojourn among this race.

"A very striking peculiarity of the architecture was that the window panes were all of opaque glass which entirely precluded any prying into private affairs either from without or from within. Evidently this folk had the excellent habit of attending to their own affairs.

"I was greatly impressed by the cleanliness displayed on every hand. They carried this to the pitch of an obsession. In one of the most beautiful gardens, to my unutterable astonishment, I saw a person, whom I judged to be a domestic servant, actually *dusting* each separate blade of grass with a little brush apparently designed for the purpose. I could not help smiling at the thought of what would happen to a careless smoker, who scattered ashes on a floor guarded and cleaned by one of these housewives.

"We turned into a broad, curving driveway, which stretched in a graceful sweep between triple rows of bright orange-colored palms to a two-storied building of robin's egg blue marble. The effect of the orange-hued foliage and the brilliant blue stone may be imagined.

"The first story of this edifice, evidently a public building of some kind, had no entrance. There was an opening on the second floor, but I saw no way of getting to it, save by a double balustrade, which swept in easy curves, one from the right and one from the left, from the ground to the floor. As the pathway along the top of these balustrades was only about three inches wide, I did not see how anyone, short of a circus performer, could manage the ascent.

"To my consternation, my guides, I no longer regarded them as captors, hesitated not a moment, but proceeded to mount the giddy way with the utmost unconcern. I hung back. They motioned for me to come on, evidently entirely failing to understand the cause of my reluctance.

"I was at a loss to make plain my difficulty, as these chaps apparently were as sure-footed as cats, and had no conception of the sensation of dizziness. Finally I hit upon a way of presenting my case. I walked a foot or so up the incline and then deliberately stumbled and fell off. They consulted together for a while, after which it was apparent they had grasped my meaning, although sorely puzzled to assign a reason for so strange an aberration.

"The leader ordered two of the party to take hold of me to steady my steps. By this means I got up safely and entered the building. The inside was a vast hall containing a large assortment of luxurious couches and divans arranged in a circle about a slightly higher dais, on which reclined a venerable personage, whom I made out to be the king or other ruler.

"This man possessed the most enormous moustaches it has ever been my lot to see. They stuck straight out on either side of him, to a distance of at least eight inches, giving a most ferocious appearance to an otherwise entirely benign and indolent looking countenance. His peculiarity directed my attention to the fact—hitherto recognized only by my subconscious mind—that these people were equipped with inordinately large moustaches, greatly resembling the whiskers of a cat.

"Hanging in silver cages at every available point about the room, were beautiful yellow birds, exactly like canaries, but of the size of ravens. These delightful creatures continually sang in voices of exquisite richness. Their music was unlike any singing of birds I had ever heard. They produced connected, definite melodies in four full parts. Imagine it, Forbes, my boy, if you can! Choral selections, in intricate structure of rhythm and counterpoint, the equal of any of our most famous compositions, rendered by the fresh, unaffected voices of nature's children of the forest and meadow—birds! It was a musical glory to stifle the senses with rapture. It was easy to see this people had not eliminated all sound, merely such sounds as they did not wish to hear—such as those produced by the incompetent performer. Real artists were highly esteemed.

"The king raised his hand. In an instant the singing ceased. After a short consultation with my conductors, he looked directly at me. He then pointed to a small person nearby, who carried what I took to be a

couple of large books, and slowly pronounced the word 'Tomasso.' After this he rapidly opened and shut his mouth several times without making a sound. As the lone representative of my world, I did not like to appear dense, but I must confess that, for a moment, I failed to comprehend his meaning. Then it dawned upon me. The little fellow was named 'Tomasso' and would teach me their language.

"I smiled in a manner I intended to denote intelligence—perhaps I only looked foolish—and nodded my head to show I understood. The king, whose name I later ascertained to be 'Tabi,' was satisfied. I was led away to a room, comfortable in every detail. This became my home for several weeks, while I was learning to speak their tongue. I will not bore you with the manner in which this was accomplished. The theme has been gone over in every tale and romance of adventurers thrown among alien races. It will suffice to state that at last I did become fairly proficient in speaking their soft and melodious language.

"WHEN I had become sufficiently adept to converse intelligently, I was accorded many interviews with King Tabi. Here I met many of his attendants and counselors, all deeply interested in what I had to tell them of my world.

"In turn, they imparted their history and manner of life to me. It is needless to state it enthralled me. My daily existence was now a quiet enjoyment of scientific intercourse with refined and cultured beings. Yet, in spite of all this, ever and anon a wave of horrible loneliness overpowered me, because of my complete separation from my kind.

"For, despite their cultural advancement, and their kindness, they were different, completely, fundamentally different. It was not the divergence to be found in a person of another country or another race, who, for all of his strange ways, was fundamentally the same human being the world over.

"It was a chasm impossible to bridge; a gap across which there was no passage. *They were a different genus!* At this point I may as well tell you what I had already dimly suspected and what you may have guessed for yourself. They were evolved from cats, just as we are descended from apes!

"But do not misunderstand me, my dear Forbes. They were not cats. They were human beings, just as much as you and I. They were no more cats than we are monkeys.

"Although Venus is a younger planet than the earth, the more rapid breeding propensities of the feline had compensated for this adverse time-factor with the result that their evolution had been fully accomplished. Generation upon generation of adjustment to environment—the survival of the fittest and all it implies—had brought about modifications in the cat, to produce the cat-man analogous to those impressed upon the ape to produce the ape-man.

"Evolution produces but modifications, differentiations. The fundamental germplasm is always present, breeding true to type throughout the centuries and, ignore it as we will, yet it forms the dominant theme of

the song of life, nevertheless. It must be so. "It is a long way from a meeting at Newton Hall of scientists arrayed in starched shirt fronts and immaculate white ties, to the primeval chaos of the treetop, and it was a long way from the sedate, dignified, handsomely attired men and women attending a function at King Tabi's court to the blood and reek of the jungle, but the ape forms the basis of the one and the cat lurked beneath the surface of the other.

"To make clear my meaning, consider the ape-like characteristics of humanity. Most people accept evolution as a theory that we have been descended from monkeys and—there conveniently stop. Pushed to its logical conclusion, however, to be descended from a common ancestor with the ape means to possess the same mental make-up as the ape; a million times removed in degree, if you will, but identical in kind. From this conclusion there is no escape.

"The insatiable curiosity of the monkey has become, in man, the scientific zeal that probes the stars and fathoms the secrets of the invisible atom. In minds of lesser caliber, however, it has become a miserable prying into other people's business. The chatter and mouthings of the ape have developed into the grandest oratory; the most noble drama—and also into the senseless clap-trap of ordinary conversation of the street. The inconsequential lack of purpose displayed by monkeys has brought forth mankind's delight in wholesome play, games and the like, but it has likewise wasted the greater part of his efforts in the pursuit of useless baubles. The acquisitiveness of the ape, the desire to get hold of things, has given us our property-sense, from which come the benefits of business and commerce, but it also has produced the loathsome miser in his lonely garret.

"So with all else. Our civilization is simian in origin, our virtues are simian virtues; our vices are simian vices; our thoughts, our very selves, are simian, and simian they will remain.

"In the same way, in this people, the characteristics of the cat, under the spur of evolution, had grown into a mentality which, while removed to the *nth* degree from the limits of the cat, nevertheless at heart was the mentality of the cat, to be explained only by cat psychology.

"Their civilization (equally as intricate and highly developed as ours) was a feline civilization, based on feline hopes and desires and suited only to feline inhabitants. Its good points were the virtues of cats; its faults were the imperfections of cats, in which no other animals save cats would have gone astray. In them, as in us, the life force had bred true. No matter how cultured, no matter what intellectual heights they might scale, cats they were and cats they would remain until their act was played out and their curtain rung down.

"'Our government,' said King Tabi, leaning back on his cushion, on which was beautifully depicted in gold embroidery, a mythological legend representing a dog presenting a gift of a mouse to some cat-god, 'compared to yours is a strange mixture of freedom and despotism.'

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"He thoughtfully blew a couple of fragrant whiffs from his catnip perfecto, and knocked off the ash into a little blue china tray, on which was painted a pretty love scene where several gay gallants serenaded a famous belle of a bygone day. He told me this was a scene from their age of romanticism, corresponding to our days of chivalry.

"From what I have been told, your government is quite unlike ours," I replied, accepting a helping of roast canary, but tactfully declining a rat sirloin. "That is to be expected, however. Naturally the feline temperament would produce a different ideal from the simian."

"Yes, quite different," his majesty replied. "Our earnestness of purpose (a cat never fools; it always means business, you know) 'holds that absolute authority is the most efficient way of getting things done. Hence, in public matters, I exercise a power beyond any power known to your kind.'

"Our generals in war time have full power," I ventured.

"True, but according to you, even they are limited by custom and public opinion. I am limited by nothing. A citizen who questions one of my royal decisions would not be held at fault. He would be considered insane and placed in a mad house."

"On the other hand," he went on, "our love of personal freedom prevents any attempt to regulate the lives of the people in private matters. If I tried to interfere in morals, education, religion and what-not, in the way you tell me your governments do, my reign and my life, by a simultaneous end, would pay forfeit to my temerity."

"He delicately sipped a valerian sherbert. 'But pshaw, why should I wish to?' He smiled and set down the empty glass, which was instantly removed by a small fellow dressed in gray livery. 'What do I care what they do, so long as they keep the law and pay their taxes?'

"Here was food for thought. For the life of me, I could not decide whether our system or theirs was better. The callous selfishness of King Tabi in regard to the welfare of his people was truly appalling, but, as he, himself, pithily remarked, is our paternalism entirely altruistic or does it largely gratify a simian desire to poke our noses into some other fellow's business?

"Then there was the despotism. Why, life would be unbearable if one were at the unqualified mercy of a monarch like King Tabi! Yet, when all was said and done, was the entire system of government more despotic than those on earth? Which is more irksome—implicit, blind obedience in a few things, with entire liberty in all else, or a modified, partial obedience in almost every act of one's life from the cradle to the grave? We gave it up. I could not decide and neither could the king. We agreed that our way was no doubt best for us and their way was best for them.

"I HELD many interesting conversations with a Professor Leo, M.E.O.W., who was head of the educational system, if their method could be

called system. To me it seemed chaos, the absence of all system, and yet it worked. It produced results. Its basis again was the love of personal freedom, inherent in every member of the cat tribe.

"'We compel no one,' asserted Professor Leo. 'What is the use? If they don't want an education, one can't put brains into their empty heads by forcing them to go through a routine curriculum they neither appreciate nor understand.'

"'But, Professor,' I objected, somewhat shocked at his open brutality, 'don't you think even a little education is better than none? Such total ignorance—'

"Leo was a rather crusty old codger, whom one had to handle with care. I had offended. He rose from his divan and took a position directly in front of me, delivering the following ukase in his best lecture-room manner. His green eyes snapped and his whiskers stood out horizontally with outraged dignity at the barest intimation of contradiction. He must have been a fine old customer for anyone to study under. I wish he had some of our freshmen. He'd make them sit up and take notice. But I digress.

"'Education is open to all,' he said, 'rich and poor alike. There is no distinction. All must pay the same price, not in money, as you do, but in personal service. A student binds himself to his college, as a servant in his particular line, for a term of years proportional to the particular branch he selects. The dull and indolent are ruled out of this sort of thing by their own natural lack of ambition. Only those possessed of minds really worth-while enter the colleges at all. The result is all college graduates make good in their particular fields.'

"He glared at me for a minute, seemingly searching for a word. Finally he found it. It was one of our words (their vocabularly had no equivalent), which I had taught him, and which momentarily had escaped his mind.

"'We have no *flunks!*' he snapped and walked out.

"His statement was true, they had none. By allowing nine-tenths of the population to eliminate themselves, they avoided any failures among those who elected to study. The results of their system were unique. A simply overwhelming majority was steeped in an ignorance darker than blackest night. At the top of their society was a ruling class of actual geniuses, who reached their high position, not by political pull or the might of wealth, but by sheer, downright brain power. For every one of our people who cannot read or write, they had a thousand, but for one Columbus, Shakespeare, Verdi or Edison, they had ten or twenty. Which was better? Their way or ours? But I am recording a visit to a strange land, not writing a philosophical treatise!

"THEIR science of medicine was far below ours. Indeed, it was scarcely to be mentioned in the same breath. The egoistic, self-centered nature of the cat had prevented any real progress in a sphere, which, of all fields, most requires sympathy and human understanding.

"Such hospitals as they had were torture chambers;

shambles. Anaesthetics were unknown. The well-known fortitude of the cat under the severest pain had rendered them unnecessary. Their doctors (butchers would be more appropriate) performed major operations on unlucky devils in full possession of their senses. Vivisection? They had it—and then some!

"Imagine it, you earth men, who find it necessary to apply soothing talcum powder to take away the sting of a shave! Legs sawed off; stomachs gashed open; brains sliced and pared—God knows what atrocities perpetrated with a cynical indifference that would have made Nero blush for shame!

"My suggestion to give them the benefit of my greater knowledge (the fact was not questioned) was met with a surprising lack of interest. Naturally one would think the subject of health would be absorbing to any race, whether descended from cats or what-not. Not a bit of it.

"'What's the use, friend Lieveamour,' remarked the lady, to whom I was expounding my plan. This lady, by the way, had just buried a relative whom I easily could have saved. 'If a thing is out of order, one throws it away, doesn't one?' She paused to gently fan herself with a gorgeous fan made entirely of canary feathers. 'Well,' she languidly continued, 'if a human being is broken or worn out . . .' She smiled a bewitching smile and went on fanning herself.

"Her unfinished sentence was more eloquent than a lecture could have been. It brought home to me the tremendous gap between their civilization and ours, the difference between the cat and the ape. I thanked God that, with all its faults, I traced my descent from the ape. However, as King Tabi would put it, belonging to the latter, naturally I would look at it that way. He didn't. It was all in the point of view.

"Mechanically they were centuries, ages ahead of us. Mechanical contrivances, the nice adjustment of cogs, wheels, bolts and the like, is the science of patience par excellence. Exact balance, perfection of workmanship is essential, and what creature is more patient than a cat? Compare the untiring persistence with which puss watches a mouse hole with the restless, nervous leaping about of Jocko from perch to pole, and a slight idea of the superiority of the cat's descendants in a calling needing patience can be imagined.

"Their chief engineer told me the main drive wheel at their water works was set and reset three hundred and fifty-two times before it was finally passed! The result is it has never needed any attention, although it has run continuously for over forty years. So with all their work. They do it right in the first place, no matter how long it takes. That is the secret of their skill. Extreme care on each job; every task is a work of art. Mass production and cheap articles are unknown. So are failures and breakdowns unknown. Thus it is—different again.

"This chief engineer, a brother of the king, was the one who devised the means of sending this message to earth. His method was not divulged to me, as it involved a secret process, knowledge of which was permitted only to members of the blood royal. He is also

going over my *Space Bender*, but will not have it ready for me to try the return journey to earth for some time yet. The work could not be left in better hands.

"I received a royal command to attend a state ball to be given in honor of the marriage of the crown princess, Pummás, a charming young girl, to a powerful noble from a distant province, with whom she had fallen deeply in love and who returned her affection. Never had I thought possible such splendid toilettes as these ladies and gentlemen exhibited.

"You know how a cat washes and smooths itself, never seeming satisfied with its appearance. Well, this habit of personal cleanliness, born in the feline, has evolved into a vanity surpassing anything you or anyone else on the earth ever saw.

"The men wore silk, satin and velvet, studded with all kinds of precious stones. The colors were carefully selected to harmonize with their complexions.

"The women—shades of Helen of Tröy—the women! Their gowns were composed of some kind of cloth actually woven from strands of solid gold and silver, trimmed with the down from young humming birds' breasts; iridescent, glowing, almost afire with a shimmer of flashing, shifting color. The scene completely eclipsed my powers of description.

"At this ball a most regrettable affair took place. During dinner, one of the men paid too much attention to a beautiful lady across from me, who, so I was informed, was engaged to a gentleman beside her. Words arose and, to my dismay and astonishment, the two men retired to an anteroom where, after about five minutes of furious fighting in full view of the entirely unmoved company, the rightful lover deliberately slaughtered his rival with a large sword, literally hacking the unfortunate man to pieces. No one else seemed to think anything of this, least of all the fair cause of the trouble. All went on eating, drinking and conversing in the most matter of fact way.

"I was told that these duels were of frequent occurrence and were considered quite the conventional way of settling differences. The victor in this particular combat held a record of three hundred and eleven such murders to his credit. When I add that this amiable personality was the head of a school for children and was considered rather too mild in his administration to enforce the proper discipline, need I say anything further about the ferocity of this race? Yet they were not quarrelsome. They were deadly. As the entire planet was under the rule of King Tabi, war was unknown. This was fortunate, for the possibility of organized conflict among such fiends would have been too frightful to contemplate.

"There are interesting things without number which I might tell you, but which I can barely touch on, due to lack of time. Such are their wonderful diplomacy, having its origin in the stealth of the feline; the marvelous perfection to which the vocal art has been raised; the peculiar custom of expecting children to fend for themselves at an age when ours are still in the nursery; the great mouse ranches I saw, where 'mouse boys' herded giant rodents with all the glamor and romance of our wild west and—the list is endless

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"I have tried to select such facts as I believe instructive and interesting. My engineer friend clamors for the manuscript which is to be dispatched in his secret container. He says it will take about two months for it to reach the earth. He is waiting beside my desk, so I must bring my account to a close. You may never receive it—I can only hope that you will.

"I cannot return to my home and loved ones until *The Space Bender* is put in condition and I receive permission for my departure from King Tabi. His majesty desires to consult the 'Yow-Yow' or General Council before issuing his royal mandate. From several hints he has given me, however, I have no doubt it will be favorable. Look for me, think of me, pray for me, for surely never did mortal man stand more in need of aid than I do. Until we meet, old comrade, pupil and helper—good-by!"

FORBES laid down the manuscript and sat, head on hand, staring into the fire. The date on the manuscript, given in earthly time, was over twenty years ago, so the glass bottle has been buried approximately that long.

Twenty years! A long while. Surely in that time the marvelous machine had been repaired. It could not be otherwise. Disaster had overtaken his well-loved friend and employer. It was no use to hope. It was finished.

What had happened to him? Where was he? Had the king refused permission to return to earth, and was Livermore a prisoner on that strange planet?

Perhaps he had made the attempt and had failed; had been killed or marooned in some totally incomprehensible world of the fourth dimension.

Ye gods, what an adventure! A momentary doubt assailed Forbes. Perhaps it was a huge joke, after all. But no, Livermore *had* disappeared, and, so far as he could tell, the glass bottle and the paper *were* entirely new substances. He did not know what to think.

He recalled the strange behavior of his pet cat, Archibald, when brought near the bottle or the manuscript. Could it be that some subtle bond attracted the creature to these products of his super-relatives? Pish! That was arrant nonsense. And yet—

Forbes rose, knocked the ashes from his long extinct pipe, and walked over to the window, which he raised to admit a flood of fresh, cold air. The storm had ceased. A shaft of golden sunlight flashed on an opposite window. The milkman called to his horse and jingled his bottles. A bell clanged on a distant car. The man across the way opened his door, poked out his head, and took in his daily paper. It was day. The affairs of the world went on . . .

* * *

By this time you probably know that the author has had a little fun with you at your expense; but, after all, even though this story is an excellent satire, why should there not be a cat-like race somewhere? Do we not have a cat-like man and woman with us already? Every one of us has met the cat-man and the cat-woman. Why not a whole race?—*Editor.*

THE END.

THE FIFTH DIMENSION

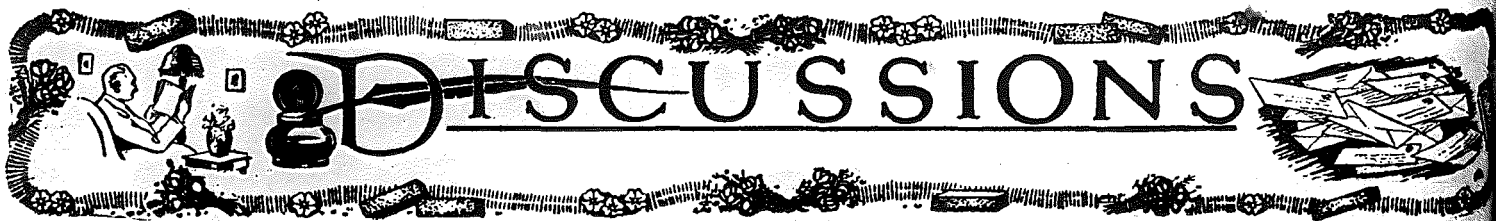
(Continued from page 825)

the previous one. We see and recognize this truth daily in the phenomena of humanity. Every baby born starts life a little in advance, materially and mentally, of its father. This process is very slow and we call it evolution, but it is a perceptible progress nevertheless. It may be aptly likened to the whorls of a spring as compared to a mere flat coil of wire. The earth follows an orbit around the sun, and every year it is in the same relative position with regard to the sun as it was the previous year. It has completed one

of its countless cycles. But you know as well as I do that the sun and the earth, as well as the other planets, are *all* farther along in space together. There is a general progression of twelve miles a second on some vaster orbit. This general progression, then, is analogous to our possibility of change and growth; the power to better our conditions; in other words, it is a fifth dimension."

"The wheels of the Juggernaut can be turned aside," I said reverently, "and *there is hope.*"

THE END



In this department we shall discuss, every month, topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine. In case a special personal answer is required, a nominal fee of 25c to cover time and postage is required.

SPEED OF SOUND AND OF LIGHT

Editor, AMAZING STORIES:

I have noticed that quite a number of the contributors to the "Discussions" Column have been writing about the effect a rapidly moving body

In the first place, all motion is relative. Wherefore, if someone were standing on any body moving sixty miles per hour, and shoot a bullet in the same direction he was going at sixty miles per

given off from that body travel with twice speed of light? In the same way, would not speed of its source tend to speed up or retard speed of sound? Yet the speed of both light

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