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### OUR COVER ILLUSTRATION

Depicts an exciting episode from Otto Wilhelm Gull's novel "The Shot Into Infinity."

Here we see the spaceship *Geryon* plunging towards the moon. The moon may be observed at the right-hand side, still a great distance away.

In the position shown, the spaceship is rushing ahead at a tremendous speed, yet it is possible for the adventurers to venture outside the spaceship in airtight and acid-insulated space-suits. The men are connected to the spaceship by lengths of thin telephone wires, by means of which they can converse with each other. Inasmuch as they are in the so-called "free-fall," there is no strain on the light telephone wires, which they also use to pull themselves back to the ship. They may also return to the ship by firing pistols, as is also shown, in the opposite direction to which they wish to travel.

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# The SHOT into INFINITY

by  
Otto Willi Gail



They told about the devil's work on the plateau. The earth had been torn up, a hellish glow had flooded the mountains and everyone thought it was the end of the world.

## PREFACE

(Which may be read through or not)

WHEN the ingenious Jules Verge wrote his "Journey to the Moon," he did not suspect how soon this problem would engage the attention of serious physicists. What he consciously treated as a fantastic utopia is to-day close to realization, and perhaps the first rocket is hissing on its way into space before this book leaves the press.

The "Shot Into Infinity" is no utopia. The technical basis of the novel rests on the results of the most modern research and physical facts, and it is nothing but the development of the practical applications of discoveries which are no longer questioned to-day.

Very often persons who undeniably possess a certain degree of judgment have asked me, with a superior and almost pitying smile, whether I seriously believe that someday people might be able to leave the earth. Once and for all let this question be answered in this place by a counter question: Why not?

In the final analysis the possibility of all the marvels of the technology of transportation depends on brute force. When the motor was invented which afforded half a horsepower for each kilogram of its own weight there sprang into existence the airplane which hitherto had been decried as a mad fantasy and

specify a way was found to overcome the little extra problems of the designs of the wings, the propeller, and so forth. The motor which is to carry persons (or for that matter itself only) into space must actually develop more than 100 H. P. for each

kilogram of its own weight, in order to be able to combat successfully the powerful attraction of the earth. But unless all appearances are deceptive, this motor has already been invented or at least is *en route* to discovery.

In particular two scientists of world fame have been working at this problem for years—Prof. Hermann Oberth, a German, of Mediasch, and Prof.

Robert H. Goddard, an American, of Worcester, Massachusetts—and both have solved it, though for the present only theoretically, by means of the rocket motor. Once this mode of propulsion (which is not dependent on any atmospheric resistance and develops its full efficiency only in a vacuum) has maintained itself in practice, then the "space ship" itself becomes an alluring but absolutely solvable problem for skilled constructors. For what the uninitiated regard as unconquerable factors, the fearful cold in space, the lack of air to breathe, the absolute absence of weight, are not at all real hindrances, and

we may confidently assert that the engineers of 1930-40 will be able to make vigorous assaults on these problems with air generators and heat insulators.

To both of these gentlemen I herewith express my sincere admiration and my hearty thanks for their co-operation.

Of all the investigators who devoted themselves to the problem of the navigation of space, at present the American Professor Goddard seems to be the most successful

for if the last reports from Worcester are accurate, in the near future the first Goddard experimental rocket (without passengers) will ascend to the moon, and mankind is at the eve of a veritable new epoch in world history.

OTTO WILLI GAIL.



OTTO WILLI GAIL

IN presenting this complete novel, we wish to call attention to the fact that this story was published first in Germany. The present translation was made on behalf of SCIENCE WONDER QUARTERLY, the translation being done by an American, Francis Currier. This is the first English translation, and SCIENCE WONDER QUARTERLY has acquired all rights for this story in the United States.

The story was selected by the editors of the QUARTERLY because it is without doubt one of the greatest, if not the greatest, interplanetary story published in recent years.

With complete German thoroughness, the author has not written simply a science-fiction story, but has incorporated in it the latest scientific advances in the new art of space-flying.

It may be said without fear of contradiction that the material contained in the greater part of the story has never been used by any science-fiction writer before.

While writing the story, the author has had the collaboration of practically all the German scientists who have of late come into prominence in their researches, into not only rocket flying, but space flying and astro-physics.

The scientific angles contained in this story are as accurate as the present art permits, and may be termed prophetic in many ways.

There is nothing contained in this story that might be termed fantastic, so far as the future is concerned. Sooner or later the art of navigation of outer space will catch up with the predictions contained in this unforgettable story. It is certain to become a classic of its type before many years have passed.

## CHAPTER I

## Mysterious Happenings

**I**N one of the ravines which transverse the southern portion of the Carpathians in their steep descent to the Wallachian plain—between the romantic deeply-cut valley of the Oltu River and the pass of Predeal, over which the express trains thunder on the way from Czernowitz to Bucharest—lies the lonely monastery of Valeni.

A bad, almost untravelled road branches off from the highway above the village of Suicii and winds between darkly-wooded crags in its easy ascent to the old walls of the monastery. Long forgotten and a prey to the moss and vines, the monastery clings to the mountainside, a reminder of times long past when the orthodox Carpathian monasteries changed into stubborn castles and stout defences against encroaching Islam, and the spiritual lords were no less practiced in weapons than the bailiffs and dukes of Swabian fortresses.

\*\*\*

It is now more than a year and a half since the inhabitants of Suicii were surprised by an unexpected visit. The strangers arrived with a line of trucks, no one knowing whence they came or what they wanted. Then wagons came almost daily from the Oltu valley, laden with tools and building material, chests, furniture, and mysterious machinery.

Curiously, yet shyly, the villagers watched, as gradually a little colony grew in the valley of Valeni—as electricity and radio made their appearance. But none of the strangers understood Roumanian or Hungarian, and so the purpose of the new colony remained a riddle. Even the magistrate in Calimanesti knew only that the people were from Little Russia and were workers of the oil magnate Romano Vacarescu, to whom the forests about Suicii belonged, and that they were to build some dwelling houses near the monastery of Valeni.

At length the excited minds were eased; people became accustomed to the increase in population, and continued to till the cornfields and to drink the inevitable plum brandy. But one day curiosity was newly aroused by the story of a shepherd who came from Magura Cozia.

On the open plateau between Cozia and the damp valley of the upper Arges River strange buildings were being erected. Heavy concrete pillars, surrounding a circular open space, rose high in the air. Within was being built a peculiar structure, about which nobody could form a clear idea. Some claimed that it was the dome of a fortified tower, others asserted that a mighty memorial monument was being erected there, and extremely clever persons could tell (from some certain source or other) about an airport which promised Suicii greater economic importance.

But as the construction proceeded, the entire plateau was surrounded with a high fence and the entrances were carefully guarded. Thus the imagina-

tions of the natives had free run, and soon the most impossible stories about the mysterious structure were current.

There was also great activity within the ancient walls of Valeni. Heavy hammer strokes thundered from the subterranean cells, machines hummed day and night, and thick clouds of smoke poured from the newly erected chimney. In the abandoned monastery yard rose heaps of coal; oil tanks and steel cylinders stood in long rows by the walls; and thick bundles of electric wire ran from the monastery, some across to the plateau and others to the dwellings of the workers.

At night, when the Roumanian mountaineers were sleeping in their sheepskins on the wooden porches of their mud huts, a bright illumination shone from the old walls and cast trembling reflections on the black mountain side.

## A Meeting in the Monastery

**A**N impressive automobile sped through the winding valley of the Oltu. The narrow foot of the valley, between the closely crowding Carpathians, gives barely room enough for the road, the river, and the single track railway which runs obliquely through the mountains from Hermanstadt to Siatina. Fairly often, in fact, the highway crosses the rails and traverses the Oltu River on shaky bridges. Coming from Ramnicul Valcea ("Garmisch," as the people of Bucharest term it), the car took the sharp curves before Calimanesti at undiminished speed, climbed with a rattle the ridges of Berislavesti, and crossed Suicii in its mad course. The natives humbly knelt: they recognized the green car of the man who owned the oil wells of Ploesti and countless square kilometers of Carpathian forest.

By speculation on a grand scale the insignificant little Roumanian had in a few decades amassed a fortune reckoned among the greatest in the country. Oil and wood had been his motto: oil for export, bringing him good foreign money, and wood for the wide treeless plains of Wallachia.

The car stopped squarely before the monastery. "Where is Mr. Suchinow?" the passenger demanded of the young man who promptly opened the door of the car. He spoke French, the language of an aristocrat of Bucharest.

"Monsieur Suchinow is waiting for you down at the office."

"Too bad! Call for me again in an hour and a half," he ordered the chauffeur, and then he descended into the dark cells of the monastery.

In the narrow corridor leading to the office, a slender man came to meet the visitor.

"You are punctual, Monsieur Vacarescu. How was the trip across the mountains?"

"No circumlocutions, if you please, Monsieur Suchinow! I do not enjoy idle conversation when it is a matter of business."

The reproved man remained silent. He knew the peculiarities of the fat little financier and yielded to them.

The two men entered the office, a comfortably furnished room, the thick walls of which muffled the noise of the workshops; the incessant hum of the high frequency generators operating close-by was noticeable only because of a slight trembling of the walls and furniture.

"How far along are you?" asked Vacarescu, curtly, sinking back into a chair with a sigh.

"Finished!" replied Suchinow, still more curtly. On his face, which was strangely dotted with green spots, lurked the shadow of a contemptuous smile.

"Finished except for . . . ?"

"Except for nothing!"

"Do you really mean that the rocket can now be released at any moment?"

"Tomorrow evening at nine twenty-five sharp (Central European time) it must be released, unless I want to loaf around thirteen days more until the next quadrature\* of the moon."

The fat financier seemed to have had his breath taken away. His surprisingly narrow hooked nose, which seemed entirely out of place on his fat broad face, trembled as though threatening to fall off.

"And I? And our company?" he snorted.

"Yes, you must certainly hasten, if the Transylvania Company is not to get ahead of you at the last moment!" remarked the slender man pleasantly.

"You have a nerve!" exploded Vacarescu angrily.

"No idle conversation, if you please, Monsieur Vacarescu! It is a question of business. We can be finished in a few minutes. The contracts are ready. Have you deposited the money?"

"I am going to protect myself. First, this matter of the Budapest account does not suit me. If the rocket does not return, I lose my money for nothing. Now tell me, who is to steer the thing?"

"Skoryna—you know very well."

"Do you really expect me to settle a fortune on this untried lad with the peaches and cream complexion?"

"Sir," replied Suchinow sharply, "you must certainly entrust all these arrangements to me, whether for good or ill."

"For my money I can probably demand some guarantee, too!" said the irritated Vacarescu.

"Does not Skoryna guarantee matters with his life? What further guarantee do you wish?"

"Bah! a valuable life for twenty thousand English pounds!" jested the financier maliciously.

A shadow crossed the green-spotted face of the Russian.

"Can one balance a human life with money, Monsieur Vacarescu? Even the life of an—an engineer like Skoryna? I beg of you to regard the discussion of this point as closed."

"At least, your preparations have remained secret?"

"Certainly, so far as is humanly possible. Of course the press notices and the information for the

Lick and Babelsberg observatories are already prepared. The radio announcements are to be sent out immediately after the signing of the papers."

After a short pause Suchinow suddenly asked:

"Why do you set such store by absolute secrecy?"

He looked slyly up at the man opposite.

"I should not like to have this German—what is his name, anyway?—"

"August Korf."

"Right! I do not want this Korf to take a hand in our game. I trust he knows nothing about it."

"How should he? After all, what harm would it do? He has not yet finished his first experiments, and he could hardly make up my head start. By the time he can think of competing with us, we shall long since have set the world in an uproar and your foundation will be established solidly. Do you doubt that?"

Vacarescu thoughtfully twirled his watch-chain.

"I cannot help thinking that this Swabian will somehow upset our calculations."

The inventor grew pale. Anxiously he examined the expression of the financier, and he nervously drummed on the arm of his chair.

"How so?" he asked with forced indifference.

"Do not underestimate this rival! You know that he invented the rocket at about the same time as yourself; he knows the dynamic cartridge; and lately he has been asserting that he can attain twice as high a repulsion-speed by using liquid explosives. Some day this man will come into the open with some startling revelations, and then you and I are in the soup."

At these words, offering no interpretation but the speculator's anxiety about his investment of capital, the tension in Suchinow's face was relaxed.

"I see perfectly well, Monsieur Vacarescu," he said calmly, "that you have so little confidence in me and my—in Skoryna, that it is doubtless best for us to break our relation and for the Transylvania Company. . . ."

"For Heaven's sake!" interrupted Vacarescu, almost screaming at him. "You shall have your deposit! But the Lord help you, if we fail!"

With a smile bordering on pity Suchinow lifted the telephone receiver:

"Connect Monsieur Vacarescu with the Bucharest Bank of Roumania—yes, the president himself—very well, then call up here."

Then he opened the door of a little cabinet built in the wall, took out some papers, and spread them over the table.

"Here, Monsieur Vacarescu, is the transfer of license, here is my appointment as general director of the Transcosmos Stock Company, here is the sealed envelope with Skoryna's will of the twenty thousand pounds, due from the Budapest account in the case of his death, likewise the statement of your message to the Bank of Roumania (which you yourself will telephone in a few minutes)—and here is ink!"

\*The moon is in quadrature when a line drawn from the earth to the sun to the moon makes an angle of 90 degrees. Suchinow evidently did not want to travel directly toward or away from the sun.—Editor.

## CHAPTER II

## Uncle Sam

A SUNNY day of late summer was ending. The light wind which at noon had ruffled the surface of Lake Constance was ceasing, and the last dying waves were splashing on the shore.

Far out on the lake shone in the rays of the evening sun the dazzling white sails of a little yacht. It seemed motionless. The main boom swung back and forth at random, the foresail hung down limp, and the tiny current of air could not even keep up the pennant at the mast-head.

The steersman attentively viewed the horizon and the little white clouds that swam over the Alps, glowing in the sun.

"After sundown there may be a breeze again," he said to his companion; "we now can only choose between waiting and rowing. What do you think, Uncle Sam?"

"I think," replied the latter, "that we have time to wait. If the evening breeze fails us, we have at worst lost a couple of hours—or gained them, my boy! Such a splendid evening calls for enjoyment."

The helmsman rose, secured the tiller and sheet, and made himself comfortable on the forward deck.

"Just see what a festive cloak the mountains have put on to receive me. Truly, old *Zugspitze* yonder is blushing for joy that old Sam has returned. Lad, how beautiful our home is!"

"It is true, Uncle. But can all this still impress you, a man who has hunted in the jungles, meditated beside the Ganges, and frozen in Tibet. Can our poor little *Zugspitze* still seem striking to you who have seen Mount Everest rise into space?"

Uncle Sam slowly and thoughtfully filled and lighted one of his pipes, which he always carried with him in large numbers, projecting from all his coat pockets. Then he inhaled deeply, so that there was a gurgling within the beloved pipe; he blew a mighty cloud of smoke into the air and said, as soon as this busy occupation gave him time:

"Everywhere in the world there are beautiful and noble things, Gus. Yet it is always a matter of the relation in which you stand to them. See, this Everest you spoke of; you look at it and at the same time you realize that it is the highest point on earth—it is unfortunate that this is known—you reflect about the nine thousand meters, reckon and consider—puzzle your memory over all the trifles you had in school concerning this marvel of a mountain—and by the time you have successfully digested all this, you have travelled on. And you have not even become acquainted with the proud king who sits at his record height and with cool graciousness waves farewell to you from afar.

"But our Alpine range here, with yonder the abrupt descent of *Zugspitze* and across the lake *Pfänderhügeln*: these are no record-seekers, only dear old friends whom I well know. Isn't that so, old fellows? You still remember your old Samuel Finkle!"

In youthful exuberance the man of fifty waved his

hat in greeting to the mountains of his home.

"See," he went on, "it is so with everything. There is nothing in the world of which one can absolutely say that it is good, it is beautiful. It is always a question of good and beautiful for whom—that is it."

Reflectively he spat into the water in a great arc.

"As long as your dear sister was still alive, I never thought of leaving our Alps. But when she fell at the *Wettersteinwand*—well, you know all about it—when we had buried her, then I cursed the mountains; I could no longer bear to look at them, and I went to India to the jungles. But that is long ago, and I have pardoned the mountains for not watching over her better."

Then both lay silent, close together on the slightly rocking deck, listening to the lapping of the tiny waves on the side of the boat and letting their glances sweep into the greyish blue infinity.

August Korf, the famous chief engineer of the national airport in *Friedrichshafen*, pressed his uncle's hand sympathetically. In reality the little man beside him, all dried up by the tropic sun, was not his uncle but his brother-in-law, and Dr. Samuel Finkle owed his position as "uncle" only to their noticeable difference in age.

"Uncle Sam," said Korf after a while, "better dead than—than lost!"

"What! You, also?" In surprise the old traveller looked up.

"No, no, Uncle! It was only an idea!" protested Korf.

## A Question of Astronomy

THE sun had set. The sky was growing darker, and in the southeast Mars already glowed with its reddish light. Venus, the evening star, pierced the golden yellow glow of the western horizon; gradually the two Dippers lit their torches, and the "W" of Cassiopeia rivalled in splendor the sparkling starry cross of the Swan.

"Gone and carried away!" the engineer broke the stillness. "The evening breeze is not yet stirring!"

"That's the mischief of it!" said Uncle Sam in comical excitement. "You claim to conquer the universe and you cannot even conjure up a little bit of ridiculous terrestrial wind, which we need for the trip home."

Korf smiled. "Perhaps it is easier to rule space, the absolute nothingness, with its rigid laws, than the 'ridiculous terrestrial wind,' which is dependent on a thousand influences. In space it is calculation alone that conquers."

"Are you so sure of this? Do you think that chance is entirely excluded in the universe?"

"What is chance? Is there really chance, or is it not in the last analysis a phenomenon the laws of which at present still escape our knowledge? Surely it can safely be assumed that the possibility of uncalculable phenomena is reduced to a minimum, so that (strange as it may seem) human knowledge controls space better than it does numerous phenomena on our little earth."

"But this minimum may suffice to shatter all your plans." Dr. Finkle energetically drew at his pipe. "How closely defined are the limits of our life! A change in temperature of a few degrees is sufficient to cause death. On the tiny layer between the glowing center of the earth and heatless nothingness of space live man, beast, and plant; it is merely chance which has left exactly this space for the possibility of life. It is a trifling fact on which our life is based, and only an equally trifling impulse is needed (for which your 'minimum' easily leaves room enough), in order to destroy it—to blow out with a breath an insignificant little human being who rashly seeks to leave Mother Earth."

"Granted, Uncle Sam! Just such an opinion was once expressed by the city council of Nuremberg, when the first railroad to Fürth was to be built, yet today the express trains speed from Paris to Stamboul.

"Shall I stop because of this minimum in the possibilities of failure? Shall I destroy my invention, because it perhaps is not yet perfect? Shall I withhold from mankind a considerable advance in knowledge, because it may perhaps lead to disappointment?"

"Gus, you misunderstand me. Believe me, I admire you and your work, which I hope you will soon show me. But I doubt whether this constant advance in external knowledge is a blessing for mankind. Do you believe that motorists and aviators of the twentieth century are happier than the subjects of Frederick the Great, for whom a journey from Brandenburg to Cassel was an event prepared months in advance—a real experience? Who has such experiences today? Will not external knowledge celebrate its triumph at the cost of inner knowledge—and then shall we have gained anything? I dread outspreading civilization, if it destroys concentrated culture."

Korf did not reply, and for a while old Sam was also silent, knocking the ashes from his pipe on the side of the boat.

"Do you believe that man-like beings inhabit the stars?" he then asked very suddenly.

"Hardly; that is, I do not know. On the seven known planets conditions prevail which exclude the existence of living albuminous cells. The only planet whose temperature and atmosphere offer any possibility of vegetation and accordingly of life is Venus. But all investigations and observations indicate that no rational beings live even there. And of the planetary systems of the so-called fixed stars we know nothing or practically nothing."

"I will tell you something, Gus. You engineers and scientists are extremely clever persons, but somewhere in each of your brains is a gap. You can calculate until a person gets dazed, but thinking is something that you cannot do."

"You are exceedingly complimentary, dear Uncle!" said Korf with a laugh.

"Well, please give me a single valid reason—valid, you understand—why among all the millions of worlds the little clump we call earth should

alone be selected to have the heritage of life and reason! Well?"

Samuel Finkle did not seem to expect an answer. Rolling over on his side, he took from his trousers pocket a new matchbox, twirling it in his fingers, which resulted in splitting a joint of the box. He continued his remarks:

"It is megalomania to believe that! At least now, after science has robbed our earth of its ancient position as the motionless center of the universe and has assigned it the modest place of a planet circling about the sun."

"Of course you do not venture to disturb the eminent position of the sun, do you?" said Korf, amused by his uncle's zeal.

"Of course the sun must revolve about some central star or other, in my opinion Sirius, and the latter again about something more central, and so forth."

"Then you do grant a certain order of rank, Uncle. Central, more central, still more central, most central of all. . . ."

"With you mathematicians a fellow cannot speak a sensible word. Are you trying to make a fool of old Sam?"

"No, Uncle." Korf became serious. "But one thing is certain: the earth does not revolve around the sun, any more than the moon revolves around the earth. It only seems so."

"It only seems so?" Uncle Sam's pipe had almost fallen from his mouth in his surprise. "Do you know, Gus, things cannot so easily amaze an old globe trotter like me, but I am exceedingly amazed that you should mock your good uncle this way!"

Having spoken, he rolled over on his side, evidently hurt and firmly resolved to regard the conversation as closed.

"Just think a bit, Uncle; you can do it better than I! Where would your theory be with regard to the equality of the stars and consequently the rational beings living on them, if you allow the sun the rank of a central star? I only want to confirm and supplement your theory. The universe is more democratic than you think."

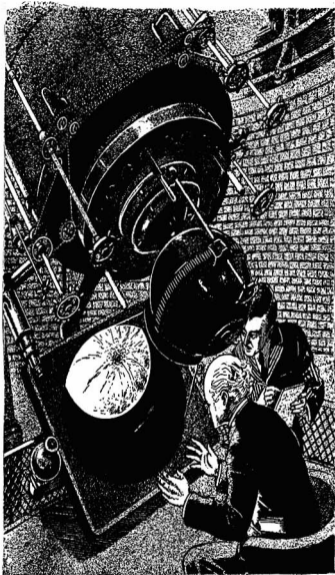
Already old Sam broke his resolution and condescended to call back over his shoulder: "What the devil does the earth revolve around, if not the sun? Are you accusing old Kepler of lying?"

"Around a point, Uncle; around the same point as the sun itself, around the common center of gravity, which on account of the immense mass of the sun lies so near its center that we may well pardon this slight error and calmly pass over it. Won't you be kind enough to turn back again?"

"Then I am right, am I not?" said Sam, making a half-turn.

"Surely, Uncle! On other heavenly bodies there may well be rational beings. But as long as it is not proved, we must leave the question to philosophers and novelists. But look! The evening breeze is coming!"

Quickly he released the tiller and sheet. On the greenish black surface of the lake appeared bright



S-O-S: S-O-S came the flashes of light from space from an infinite and unattainable distance. Then the dot of light by the moon went out.



trembling streaks, coming nearer and nearer, precursors of the expected breeze. In a few seconds it reached the yacht, inflating the canvas and making the loosely flapping jib crack like a whip.

"There, Uncle Sam, this will be a speedy return trip. Look out, I am going to tack!"

The bow cut through the waves, casting up the spray; the wind sang in the shrouds; before the lake sank into complete darkness, the yacht was rocking at its buoy.

#### Bluff or Reality?

**I**N the pure sea air of California, at a considerable height above sea level, stands the great Lick astronomical observatory enjoying, more than any other, especially favorable conditions for the observation of the northern sky. The dustless air permits the use of such great magnification that the aged observer, Nielson, chose as the special field of his researches the exact study of the surface of the moon. Nielson was also considered the chief authority in the observation of the little planet Mercury, visible only in the uncertain half-light of evening or morning.

On the evening of the sixth of September the aged scientist was startled out of his calm and peaceful contemplation of the magnificent surroundings by an amazing radiogram. Carefully he studied the dispatch, uncertain whether he should regard the message as serious or as a poor jest.

"What do you think of that?" he asked his assistant.

"Suchinow—Suchinow!" replied the latter. "That must be the Russian who caused so much excitement by his work on the conquering of space by means of rocket propulsion. Do you remember, sir? He claimed that he had solved the problem and that he could actually carry out his plans, as soon as he had at his disposal a propulsion material with a latest chemical energy of about 60,000 calories per kilogram. When his experiments at that time always failed, the matter was regarded as mere fantasy. Perhaps he has now really found a sufficient source of energy."

Shaking his head, the old astronomer reread the telegram:

"September 7, 9.25 P.M. Central European Time, Suchinow moon rocket leaves 45° 16' 40" N. Lat., 24° 34' 30" E. Long., Greenwich. Observations please, Transcosmos, Bucharest."

"According to our local time that would be tomorrow afternoon at one," said the assistant. "By day we can hardly see much."

"Still less at night, if the rocket is not sufficiently illuminated," answered Nielson. "Do you really believe it at all?"

"It is not impossible. If the Russian has an energy accumulator of sufficient capacity, the matter is hardly to be doubted; spatial navigation has thus far failed only on this one account."

"Man, do not tempt the gods!" murmured the aged astronomer into his grey beard. Then he said aloud: "Make the necessary preparations and have

the observatory ready at any rate by six o'clock tomorrow afternoon. Before that we can hardly expect to make an observation."

In spite of his great doubt of the success of the enterprise just announced, Nielson spent the night in feverish excitement.

"Shall I live to see it," he thought, "this marvel of man's leaving the earth and rashly peeping behind the moon?"

Then there awoke in him the interest of a scientist who had devoted a whole life to his research. At last mankind was to receive enlightenment and certainty regarding the appearance of the part of the moon which had been hidden from the earth for thousands and millions of years! The fabulous three-sevenths of the surface of the moon, about the nature of which there was no explanation but surmises and hypotheses: very plausible, indeed, but mere hypotheses after all!

The apparently inexplicable mystery was about to be solved, and he—Nielson—need not take the question unanswered to his grave.

That night he did not close his eyes. In excitement he ran back and forth between his study and the giant telescope in the dome. Then he went down the steps of the tower and walked about in the open.

The moon shone in its first quarter through the pure sea air. It seemed to be laughing at the stir which human beings were making about its hidden side.

Nielson became thoughtful. He knew very well the problem of the space ship, which years ago had been widely published in all the papers and had then sunk into oblivion, since there could be no practical solution in view of the lack of a proper fuel. Likewise he did not regard it as impossible to send a shot from the earth; but could a man withstand the fearful initial acceleration? What was the use of a space ship without an observer? The radiogram had given no information on this score.

What if it were only a bad joke which he was taking as something serious?

Slowly the night went by, still more slowly the following morning. It became afternoon. Now, at this very moment, the shot was taking place, provided the news was correct. Nielson could hardly conceal his excitement any longer.

The hours dragged by. On some pretext or other he busied himself in the dome where the assistant, on the movable platform, was sitting in readiness at the eye-piece, constantly observing the eastern sky.

"I see nothing yet, sir!"

Evening set in, and still the report of the observer was the same: "I see nothing yet, sir!"

Was it possible that some joker. . . ? But Nielson said to himself that by daylight an observation was scarcely to be expected; the shot naturally could not be very large, and the presumably very high angular velocity must quickly take it from the observer's field of vision. By night, however, perhaps they could see the rocket with the naked

eye, assuming that it radiated a strong light, and could point the telescope accordingly.

Nine o'clock approached.

"We are now in the same relative position to the sun as the starting point of the rocket at the time of the discharge. Now it must be visible, if it is illuminated, provided it was sent at all." Nielson climbed the ladder to the observation platform, to relieve his assistant. With trembling fingers he turned the eye-piece, to adjust it to his old far-sighted eyes. The mighty tube was almost vertical, for by now the rocket had to appear somewhere near the zenith.

Vainly he scanned the heavens. Time passed; morning approached; nothing!

But wait! A cry of joy escaped the aged scientist. There on the firmament was a glowing streak. In a loud voice he called the assistant.

"Is it visible, sir?" asked the latter hastily.

"We have been swindled, after all!" replied Nielson, disillusioned. A meteor had tricked his fevered imagination. He left the observatory, utterly exhausted.

### CHAPTER III

#### Korf Hears the News

**C**OUNCILLOR HEYSE, the director of the national airport at Friedrichshafen on Lake Constance, was sitting in his private office and turning the leaves of a heap of newspapers. One item in particular seemed to hold his attention. Hastily he threw away his cigar and pressed the button of an electric bell.

"Please send me Chief Engineer Korf at once!" he said to the clerk who answered the bell.

In a few moments appeared the man sent for, a broad-shouldered blond fellow, the technical brain of the Victoria airport.

"My dear Korf," the director greeted him heartily, "I must unfortunately give you some bad news. Please sit down.

"You know," he went on, "that we cannot carry out your project until we have the necessary money at our disposal. My visit to the government to establish a suitable credit has unluckily met with no success. Reconstruction, cutting down expenses, government economy, the burdens of the peace treaty—those were the ever recurring arguments on which the refusal was based. We may absolutely give up hope."

"Then I must simply turn to the public, councillor!" said Korf calmly. "The masses will have more understanding than the narrow-minded parliament."

"Do not hope for too much!" interjected the director thoughtfully.

"Let the director recall the Echterdingen catastrophe, when Count Zeppelin's dirigible came down in flames and was destroyed. In spontaneous recognition of the greatness of Zeppelin's work the German people opened heart and purse, and in a few weeks millions were at Zeppelin's disposal.

And to-day it is a question, not of controlling the air but of conquering space, the universe."

"You are an optimist, my dear Korf!" replied Heyse. "The public is as yet too little acquainted with you and your work. Your invention is not trusted, and—believe me—the Germans give no money without assurance of success, especially in this general shortage of money.

"Exhibit your space ship to the public, travel in it to the moon, with a safe return; then, indeed, you may have any sum to build further models."

"This is just the tragedy of many great inventions! First success, then money! And if success is impossible without money, the finest thing sinks into oblivion."

"You are looking at the dark side of things, councillor!"

"What do you estimate as the lowest possible cost of the first ship?"

"From eight to nine hundred thousand marks will suffice. A still smaller and cheaper model is unfortunately impractical. One would think that this sum could be collected. Just ten pfennig from every wage-earner of Germany would be enough. If the nation realizes what the question is, it will gladly sacrifice a few pfennig."

"Yes, if the nation realizes. But it realizes only what it sees. And then, one more thing: you are too late. The Russian is already at the goal."

"What Russian?" asked Korf absently.

"You surely remember the Suchinow publications of two years ago, in which exactly your idea of the space rocket was worked out. . . ."

"Oh, yes! I know. He only lacked the principal feature, the dynamic cartridge!" said Korf with a laugh.

Director Heyse excitedly turned the pages of the newspaper.

"It is not so harmless as that! The man seems to have invented the dynamic cartridge or an equivalent substitute. Here, read this!"

Quickly Korf seized the paper. On the first page, in heavy type, running the entire width of the page, he read:

"The shot into infinity has become reality. The following startling radiogram has just arrived:

"Bucharest, September 7, 11 P.M. To-day at 9.25 P.M. start of Suchinow space rocket from Calimanesti to moon. Further news follows."

"We give this report with reservation. A confirmation of the news is awaited. As we fully reported in No. 47 of last year, Dimitri Suchinow of Little Russia about two years ago conducted the first experiments. . . ."

Korf read no further. His eyes flashed.

"Can the Russian," he murmured, "also have discovered the dynamic cartridge? Strange!"

Shaking his head, he studied the article to the end.

"Well?" asked the councillor.

For a time Korf did not reply; then he said slowly: "I do not know what propelling force Suchinow is using for his rocket. One thing is

absolutely sure: if it does not attain the necessary exhaust speed of at least 3000 meters a second, the Russian will not reach the goal. And I think I can correctly state that this performance can be surely attained only by my new machine with liquid fuel. If Suchinow, as is very probable, is operating with solid explosives of the type of the dynamic cartridge, he will not lift his machine above the field of attraction of the earth, or else . . ."

"Or else?"

Stressing each word, Korf completed his statement: "Or else he will pass the limit of the earth's attraction by using up the last supply of energy, but then he will never return."

"A frightful thought!" groaned Heyse.

"Unfortunately a warning would already be too late." Korf took up the newspaper again. "The rocket ascended last night."

"Even if it were not too late, it would not help. Do you really believe that an inventor would seriously consider the warning of his rival? Fancy his letting himself be induced to abandon his enterprise with the goal in sight! Such a warning would also be thought by the public the maneuver of a rival and would expose you to ridicule without helping anyone. No, it cannot be done at all."

"There still remains the hope that Suchinow has simply released an experimental rocket without occupants. The report certainly does not mention any passengers. But what benefit will astro-physics derive, if a lifeless machine is sent up without an observer, or if the observer does not return alive? Either way, the shot into infinity is an interesting experiment but nothing more, and it will end in a fiasco."

"So much the worse, if the Russian fails!" cried Dr. Heyse. "Then public opinion will be aroused and we shall have no success at all in collecting money for an apparently discredited affair, the hopelessness of which will appear established by this mishap."

"My plan is not hopeless and cannot be discredited by Suchinow's presumable mishap," replied the inventor firmly. "I sincerely beg you, Councillor, to start a public drive for funds. I trust the judgment of the German nation. And now may I be excused? A visitor is waiting for me in the laboratory."

"Incorrigible optimist!" grumbled the councillor, when Korf had gone. "He does not even wonder whether this drive for funds will be sanctioned!"

#### To Mother Barbara's

APPARENTLY unconcerned, Korf hastened to his laboratory, where Uncle Finkle was already awaiting him impatiently. In one hand the newspaper, in the other his inevitable pipe, Sam ran to meet his brother-in-law, gesticulating and shouting from halfway across the room, so that his voice broke:

"Have you read it? There is a race for the moon! The Russian. . ."

"Apparently has money!" interrupted Korf.

"That is his only advantage. Yet he will get to the moon with money just as little as I shall without it."

"Well, the question of money is not so difficult. Just sell some licenses." With a roguish wink he nudged his friend.

"Licenses?"

"Of course! The simplest thing in the world! Mamee will pay you a pretty penny for the sole right to install saloons on the moon. Don't you think so?"

"It is too bad that apparently there is neither tobacco nor wood on the moon, or I should gladly give you the tobacco pipe monopoly!"

"Thank you very much! Unfortunately I have no use for it. I intend to end my days here on earth. But, joking aside," added Sam sorrowfully, "it is cursedly unpleasant about this rocket. Where did the fellow get it?"

"It is nothing remarkable," answered Korf calmly, "that the very same discovery should be made at the same time by different persons who have no connection. The usual duplicity of events! Besides, this Suchinow came before the public with the project of spatial navigation somewhat ahead of me."

Angrily Sam knocked the ash from his pipe.

"The devil take the entire rocket business, for all I care!" he grumbled. "But if people absolutely have to travel to the moon, then I think it need not be granted to a Russian to be the one who wins the laurels."

"He is not there yet, Uncle!"

"I hope he breaks his neck! I must dissolve my anger, or I shall burst. Come, lad, let us go to Mother Barbara's for a pint. . ."

"Don't you want to see my experimental model?"

"That would be bad, Gus, very bad! With this wrath inside me? Impossible! The only help is a good drink. Trust old Sam; he knows the things of this earth. When I was just a lad, I often found consolation for my bad lessons by going to Mother Barbara's."

Firmly he took his resisting brother-in-law by the arm and led him away.

In the narrow drinking room of Mother Barbara's inn guests were already sitting, in spite of the early afternoon hour. They were disputing loudly and eagerly about the great event of the trip to the moon.

"The attempt ought to fail," burst out a stout grain merchant, striking the table with his fat hand, so that the glasses clinked. "It's a real shame that a fool of a Russian is getting to the moon ahead of us people of Friedrichshafen. Who built the first Zeppelin? Who flew over to America? We did! And who started this whole business of travelling to the moon? We people of Friedrichshafen. And now are we just going to look on? That is not right, no, it isn't!" Hurriedly he emptied his glass.

"It is terrible, terrible as the devil!" affirmed his neighbor thoughtfully.

"Do you remember," went on the merchant, "what a stir it made when the ZR 3 flew across the ocean, when the whole world looked at us here in Friedrichshafen? And now the moon and the stars would be looking at us, too, if Korf had hurried a little more. Isn't that so?"

"Perhaps Korf sold his invention to the Russian," whispered his neighbor behind his hand, moving a little closer. "We don't know!"

"Don't talk nonsense! Korf giving his business to a foreigner! You don't know him! No, Korf wouldn't do things like that, and now he has invented something quite new, very much better."

"Then why doesn't he build such a ship, eh? Why does he let the Russian fly off and just look on?"

"Well, he put in all his time and ran out of money."

"But look here, this Russian has done it. I don't know, but the whole thing doesn't look good to me."

"Look here," interrupted a third. "This whole Suchinow business is just a swindle! Have you seen the rocket, or has anybody else seen it?"

"Not that I know of!"

"But we could see it flying to the moon. We see the moon all right!"

Busily Mother Barbara ambled around among the tables. She hardly had a chance to stop in her filling the glasses. It suited her nicely. She rejoiced at every event which could excite the people of Friedrichshafen, because excitement causes thirst, and thirst must be quenched. She enjoyed nothing so much as seeing empty pint steins before her guests.

Suddenly the conversation at the head table ceased; two new guests had come in. Inquisitively the people looked at the couple, well known to all Friedrichshafen, persons especially noticeable on this day of days.

"Good day to all of you!" said Uncle Sam jovially. Korf merely nodded absently and took a seat at a table in the partitioned corner behind the buffet.

"Yes, old Sam is still alive, too!" was the greeting of the fat old landlady to the friend of her youth, and she fairly beamed with joy at seeing him again. Without waiting for the order she set two glasses of old Rhine wine on the table and then began a very lively and extensive conversation with Sam. The inquisitive guests at the head table, who were hoping to learn all sorts of things about the moon episode, soon turned away disappointed and bored, beginning again their interrupted dispute, first softly, then louder and louder, with an incessant flow like a mountain torrent. Only an unintelligible confusion of voices, occasionally interrupted by heavy pounding on the table, came through the thick clouds of tobacco smoke.

Korf sat silently in the corner. The newspaper announcement occupied his mind still more than he showed. What kind of energy accumulator did Suchinow possess, that he should venture to despatch the rocket? Would this event harm or

help his own plan? Would the rocket really reach the moon? Above all, was there an observer in the machine, and was he still alive? The evening paper would surely bring more news. Besides that, Korf did not think it impossible that the rocket would be visible this evening. As to seeing it with the naked eye, that he certainly considered doubtful.

"A splendid woman, this Mother Barbara!" said Uncle Sam, when the landlady had again turned to the head table, rousing Korf from his reverie by the words. "She outlives generations, and her wine is splendid. Here's to your health, lad!"

#### The Disaster

SAM raised the glass to the level of his eyes, swung it a few times in a circle, sniffed the fragrant liquid, took a little sip, and smacked his lips. His lower jaw trembled like the throat of a tree-frog waiting for a fly. He sniffed again and took another drink. Thus it was a long time before the old connoisseur set down the glass again, wiping his mouth and uttering a deep sigh of content from his very soul.

"Now I am more in the mood, Gus; just fire away, what do you think of this new thing? It's probably a swindle, isn't it?"

Korf shrugged his shoulders.

"Who could be interested in exciting the world with such false news? It is rather late in the year for an April fool joke of this kind!"

"Just tell me directly, Gus, why your work is progressing so slowly that someone else could get ahead of you?"

"There are various reasons, Uncle Sam. Two years ago I had already made considerable progress in preparing the rocket. I had put in all my available capital. And then came the catastrophe!"

"That is right. You wrote me once about a great fire. I was then in Bombay, having quite a time with the English. They absolutely wouldn't believe that I had as little to do with the Indian disorders as Mother Barbara with the moon rocket. How about this catastrophe, anyway?"

"Somehow the small supply of my dynamic cartridges seems to have taken fire spontaneously. Maybe there was a short circuit. At any rate, they exploded in my laboratory, luckily when nobody was there. Not much remained of my work, you may well imagine. My assistant, a Hungarian student, came near losing her life in the flames. The reckless girl wanted to rescue the box of construction plans from the fire. It was crazy, with the incessant explosions. I tell you, Uncle, my heart stopped beating when I saw Natalka plunge into the flames. I thought she was lost; I raged at the firemen who refused to follow me into the fire to save Natalka."

Korf remained silent for a while.

"Did you save her?" asked Uncle Sam, much interested.

"I did not find her. How I ever got out of that flaming inferno again is a mystery to me to-day. Later I was told that I was found unconscious

close to the fire. For days I lay between life and death. All my life I shall bear the scars of my burns."

"And Nataka?"

"Fortunately she recognized in time the hopelessness of her mad attempt and plunged into the lake with her clothing all on fire. That saved her. She escaped with the loss of her splendid long hair. I shall never forget this courageous helper, although . . ."

Korf did not finish the sentence.

"Although? Why, what did she do to you, Gus?"

"Oh, nothing! She remained here a few weeks more and helped me very much in reconstructing the dynamic cartridge. The fire had destroyed all my supply."

"And then?" asked Sam stubbornly.

"And then? Then she asked for her release. I could not keep her."

"So that was the way," said Sam, and he slowly repeated the words, "She asked for her release." He seemed to be thinking of something other than what he said.

"Speak up, lad!" he remarked after a few minutes, while he refilled his pipe. "Isn't it striking that this Nataka went away so suddenly and without cause, only a comparatively short time after the fire?"

"Without cause?" Korf laughed bitterly. "Without cause? Nataka is now living in Berlin as the wife of the apothecary Mertens; maybe right now she is a charming mother!"

"Oh, that's how it is!" said Finkle, whistling through his teeth; he was reflecting. Poor Gus, he thought. Then he said aloud:

"I thought you were going to tell me more about your invention than about the fate of your assistant."

"That can be told in a few words. I had to start again almost at the beginning, and quite by chance I hit on the combination of gases for fuel on which my new model depends. If the airport had not occasionally given me a little help from the surplus funds, I might calmly have buried all my hopes after the fire. Now I have made so much progress that I can build the first practically serviceable space ship as soon as I can get the necessary capital. That is terribly hard in Germany at present."

"And foreign capital?"

"That has been offered me several times."

"Well?"

"Uncle Sam, I would rather destroy my whole invention than let this, too, go to some foreign country. Isn't it enough, in case of a new world war, that the Americans threaten us with our own Zeppelins, that the Japanese rule the seas with our Krupp cannon, and that the French are making steel with our Saar coal? Truly, other countries are equipped with our own best weapons, so that they can attack us at will, if an occasion arises. No, Uncle, my space ship must and will remain a German national affair."

"The trick of this Suchinow is all the worse!"

### A Strange Coincidence

SAM again carefully sipped his wine, looking intently at his brother-in-law over the edge of the glass. He remarked quite without any previous connection:

"Do you still correspond with Nataka, that is to say, Mrs. Mertens?"

"She writes to me off and on, telling about her household affairs. The former student seems to have become a model housewife!" replied Korf drily, drawing spiral figures in the ash tray with a match. "Of course I send her a few lines off and on, too; but she never speaks of my cares and plans. Naturally! She has quite different interests now!"

It did not escape Uncle Sam, with what warmth Korf spoke of Nataka and how indifferently of Mrs. Mertens.

Gus, Gus, he thought, you seem to have scorched something besides your skin in that fire! But another idea passed involuntarily through his mind.

"Gus," he began, "do Nataka's letters actually come from Berlin?"

Korf looked up in surprise. "What a strange question!"

"I only thought it somewhat unusual that a Hungarian student should marry a German druggist."

"Well, chemical knowledge may be useful to a druggist's wife," said Korf bitterly, pulling a battered envelope from his pocket. "There, see for yourself! You may perfectly well read the letter, which I got only a few days ago. It is no love letter, such as is kept from profane eyes."

Sam took the letter. "Too bad it isn't, Gus; isn't that so?"

Korf paid no attention to this remark. "Besides, I have met Mertens myself. The young couple visited me once after the wedding."

"He didn't impress you much, this Mertens?"

"Good Lord, he isn't a hunchback!"

Sam carefully read the letter. In firm and almost masculine characters it stated that the writer was very well, that Mr. Mertens was a model husband, that the "Angel" drugstore did a fine business, that this settled existence showed that though their work together in Friedrichshafen was a pleasant memory, woman's place was not in scientific work but in the home, and so forth.

"The only thing missing is some recipes!" mocked Sam.

"Uncle Sam!" cried Korf, reproachful and injured.

"Lad!" said Finkle, rising gravely. "I know and understand; this Nataka has made a fool of you. Everybody has his youthful fancies, and no one can say anything against them. But Gus, a woman who writes such silly meaningless letters—why, Gus, such a woman is not worth one hour's thoughts from a man like August Korf. I must say so, Gus! And if to rescue the honor of your adored one you think you have to take a pistol shot at old Sam, well, please go ahead!"

With a mighty swing of his arm he threw the letters on the table, striking the paper with the fist which firmly held his pipe, so that a rain of ashes and burning tobacco poured over the table. He must have been greatly excited to subject one of his beloved pipes to such an unaffectionate treatment.

Korf shuddered; then he said in an aggrieved tone: "I cannot contradict you, Uncle. If I did not know Nataka's handwriting so well, I could not possibly believe, good heavens, that Mrs. Mertens and my—my assistant were one and the same person!"

Dissatisfied, Sam cleaned up the table, testing the

with the pencilled date. The Berlin postmark had the same date.

Then his wrinkled face lighted up; a sudden idea seemed to brighten him, and contentedly he again surveyed his wine glass.

Well—the letter was written by Nataka and posted by Mrs. Mertens in Berlin on August thirtieth. But . . .

He put the envelope into his pocket, on the reverse of which was the sender's address, returned the letter, and said, ignoring what had just occurred:

"Then money is what you lack! I shall just see about that a little. Old Sam knows many people.



The pump began to work—The candle flickered and went out. The bell sounded fainter and fainter though the clapper kept on striking.

mishandled pipe and knocking the ashes from the letter. The postage stamp had fallen from the envelope, and he tried to stick it on again—mechanically, as though trying to remove all signs of his outburst of anger.

Suddenly he stopped, held the envelope under the light, examined it with first one eye and then the other, and shook his head thoughtfully. On the place where the stamp had been stuck was written in pencil "30/8".

"Strange," murmured Sam, "to write the date of the letter under the stamp!" Then he took up the letter again. It was dated August 30, which agreed

Who knows, perhaps I can be helpful to you in this respect. Tomorrow I must be off to the Turkish Consulate in Berlin, and I shall keep the matter in mind.—Mother Barbara, bring me another of the same!"

#### A Sleepless Night

**I**N the streets and alleys of the usually very quiet little city on Lake Constance it was lively the next night. When darkness set in, the people poured out to the lake in crowds. The entire city, to the last man, seemed to come out. They crowded about the boats which were for hire, the owners of

which were doing splendid business. Recognizing the demand, they made a special increase beyond the ordinary rental fee. As far as one could see in the darkness, there were canoes, rowboats, and any kind of thing that would float on the water. With telescopes and opera glasses the people unceasingly scanned the sky with an attention such as had hardly likely ever been given the old moon in this district before.

The evening papers had confirmed the sending of the rocket, and no dweller in Friedrichshafen was willing to let this event escape him, though opinions regarding visibility and invisibility were very divided. On this evening many saw perhaps for the first time that most of the stars, like the sun, rise in the east, climbing higher and higher in the firmament, to sink again to the western horizon. Many noticed or learned, to their astonishment, that the pole star, on the contrary, seems to stand still, while the entire starry heaven revolves around it.

But when the hours passed and nothing at all sensational occurred, no arc of fire in the sky, no glowing, speeding shot, no explosion on the moon, then gradually the older persons began to go home disappointed, others followed, and all at once commenced the general migration back to the city, though morning was still far off. Only the more stubborn ones held out until the grey of morning, until the rising sun colored the eastern sky and extinguished all the splendor of the stars.

On the next morning the papers brought reports columns in length. All the reports, including those from other countries, showed a certain disappointment that nothing could be observed; yet there was scarcely any doubt that the shot had actually taken place. A leading Berlin paper printed the description by its Roumanian correspondent. To be sure, no one had actually seen the shot, but in the night in question, soon after nine o'clock, the dwellers in the vicinity of Calimanesi had waked in fright at a loud thundering crackling sound like machine gun firing. In great excitement the Roumanian mountaineers, who could not understand the frightful noise, had fled down the valley. The cattle had become unmanageable, horses and oxen had broken loose, increasing the general confusion, added to which was the incessant howling of the dogs, while the mountain beasts, heedless of men and dogs, had fled through the villages in wild terror.

The thundering had also been heard in the great hotels of Rannical Valcea, and some of the guests claimed that they had seen a dazzling light over the mountains to the northeast.

Most of the observatories which had been asked for information about their observations and opinions assumed a very cautious and reticent position.

The Babelsberg Observatory, Berlin, wrote as follows:

"Until we are informed regarding the dimensions, velocity, and direction of flight, we can form no

opinion regarding the possible visibility of the rocket. It is, however, certainly striking that up to now the rocket has not been perceived by any observatory in the world."

The Greenwich Observatory, reporting to the *Daily News*, offered rather more hope:

"... Still it is possible that the rocket is illuminated insufficiently or not at all, for which reason it can only be seen when it emerges from the shadow of the earth. We can make no prediction when that will occur, since we have no basis for calculation."

Even the following night brought no certainty, since a thick covering of clouds had formed over the entire Western Europe, and the commencing autumn mist alone was enough to make observations extremely difficult.

Soon such strong doubts had public expression that no one dared to look up at the sky any more, for fear of being mocked as a "rocket-gazer".

This development of the matter was not at all pleasant for Korf. Even if he himself, on a logical basis, believed that the shot had succeeded, it was fatal for the public to think itself made fun of. What effect would this have on his collection of funds, now just ready to start? The public might after all pass over a failure, but it would never pardon having been fooled. Doubtless the inevitable inclination to generalization would produce at least a very reserved frame of mind as regards the question of spatial navigation.

A bad omen for the fate of the national collection!

Korf grew very angry.

"This butcher!" he growled. "Apparently the machine was badly made and has come to grief. It would have been better if he had kept quiet about his shot into infinity. Public opinion is quickly destroyed!"

It did not occur to Korf that he was really heartily wishing success to his dangerous rival. He honestly hoped that the rocket would still be discovered in its path to the moon.

## CHAPTER IV

### The Riddle

FROM the Umlandstrasse station of the Berlin subway a man slowly climbed the stairs to the open air. He looked about in hesitation and then walked over to a policeman.

"The *Angel* drugstore?" answered the latter to his question. "That has been closed for six months, and the building is being made over to a moving picture theatre."

The inquirer gave polite thanks for the information. Pleased, as though the policeman had given him very satisfactory news, he continued up Umlandstrasse, carefully examining the white tablets with the name of the streets, and turned into a side street. Stopping before a high, dreary lodging house, he drew from between the tobacco pipes and pouches

in his pocket a crumpled envelope, comparing the address with the number of the house.

"Well, just wait, my dear Mrs. Mertens!" he said to herself with a grin. "You will be in our hands, after all!"

Then he entered the house and stamped up the grey creaking stairs. Each story contained three dwellings, and accordingly old Sam had to study several dozen nameplates of occupants and visiting cards of sub-letters, until finally on the fourth floor at the right he saw the name Mertens shining on a polished brass plate.

For a long time nobody answered his ringing. He pressed the button a second and a third time, when he at last heard shuffling steps in the corridor. The door, secured by a safety chain, opened barely a hand's breadth.

"Who is there?" cried a thin squeaky voice, apparently belonging to a woman and startling Sam by its tone. He never could endure talking with invisible persons.

"Just open the door, my good Mrs. Mertens, I am not a burglar," he said in the friendliest tone possible to him in his sudden excitement.

An ill-smelling vapor of sour milk and steamed sauerkraut came from the narrow opening.

"What do you want?" asked the voice behind the door.

"I shall explain it exactly, as soon as you have opened the door, Mrs. Mertens!"

"But I am not Mrs. Mertens. They moved out long ago."

"Is that so?" said Sam in surprise. "Then why is there a plate on the door with the name of Mertens?"

"Are you from the housing commissioner?" said the voice, in which there now sounded a blending of mistrust and worry.

"Do not be alarmed, my good woman! Please tell me where the Mertens live now, and I shall not bother you any more."

"Ask the porter!"

Samuel Finkle was glad to follow this rude but practical direction, and luckily found in the porter a creature of flesh and blood—very much flesh, indeed.

"Well, the Mertens!" said he. "Yes, the Mertens! Just keep your fingers away, my dear sir. Mr. Mertens is not going to keep his eyes shut much longer. I advise you to stay away!"

Uncle Sam could make no sense of the stuff the man was saying, yet he congratulated himself on having found so talkative a person. Here he could count on learning more than from the invisible spirit on the fourth floor.

"I know you mean well by me, porter," said he, "but will you please be so kind as to express yourself more plainly. I do not understand you."

Then the porter laughed so loudly that it echoed.

"Oh, don't try to fool me that way! Of course a person does not hang his dirty linen in the market place. But you don't need to hide things from

me; I can keep quiet. I've seen plenty of fellows sneaking up the stairs, when Mertens was over at the drugstore."

The porter grinned in a greasy, ambiguous way, perfectly comprehensible to Sam.

"Fortunately they moved out before we had to get after them with the authorities. This is a respectable house. Of course we put up with things and sometimes shut both eyes a bit. But she went too far, till it even caught the attention of the tax collector on the first floor, and anyway her shamelessness was getting too much for me."

"Tell me, how did this Mrs. Mertens really look?" asked Finkle thoughtfully. The porter eyed him from top to toe. There was a threatening tone in his words:

"See here, are you making a fool of me?"

"Not at all; I really do not know Mrs. Mertens. I just wanted—well, I am supposed to give her greetings from an old friend."

"So that's it—from a friend! I really might have thought that you were not the lucky man. She used to favor younger cavaliers."

Uncle Sam was getting ashamed of the unworthy rôle which, against his will he had forced on his young friend. Still, wasn't it somewhat justified? Hadn't there doubtless been tender relations between Korf and Natalka?

"How does she look?" went on the talkative porter. "Good Heavens, she's a pretty thing, one must admit; and," he added pleasantly, "she has legs, such legs that it is no wonder the men run after her. Oh, how does she look? She has short black hair, a white skin, and—Heavens, how shall I express it!—she looks like a vaudeville actress or something of the kind. The devil take the women!"

Uncle Sam was getting noticeably uncertain in mind.

"Short black hair, you say? About how old is she?"

"Much too young for you, you may depend on that!"

"And do you know her first name?" Sam went on politely, though he felt a desire to give the impertinent man a good box on the ear.

"You have me there! She has a lot of names, a different one for everybody."

"And where did you say the Mertens were living now?"

"Shortly after they had sold the drugstore, it was the turn of the dwelling. There is a lot of business in that nowadays. It is hard to pay for lodgings, especially in a pretty, roomy building, if a person to whom you let a room moves away. After that they went to Vienna and now, so far as I know, they are in Budapest. I recall, that is right. Mertens recently wrote me about the coal which was still in his cellar, and he mentioned that his wife was again appearing at the—the—what do you call it?—the Or. . ."

"The Orpheum, don't you mean?" put in Uncle Sam, who had a good knowledge of the world. "And the address? Have you the letter still?"



The porter opened a drawer of his desk and searched in a regular mountain of papers, while Sam strove to bring his ideas to order. Had his Gus been really attracted to such a woman—his Gus, whom he loved as a father would his son. To be sure, it often happens that intellectually gifted, eminent men seem smitten with blindness when women are in question. Yet he would certainly have credited his brother-in-law with a better understanding of mankind.

"Here is the letter!" The porter roused him from his meditation and slowly spelled out the words:

"Budapest, Szabolcs Utca number 54—oh, read it yourself! I don't know Hungarian."

Sam readily believed that and wrote the address in his notebook.

"One more thing: have you any idea what Mrs. Mertens' maiden name was?"

"Yes, I know very well, for many of her cavaliers knew her only by her maiden name and used to ask whether a Miss Weisz did not live here."

Old Sam's knees shook. Weisz, the Hungarian name Weisz, which the porter took for the German name Weis, was the name August Korf had given him, the name of Nataška.

Thanking the porter, he gave him half a mark, because he was always accustomed to be sparing in the way of tips, and set out for his hotel.

### Finkle Scores

**H**IS entire artfully formed hypothesis was trembling in its foundation. He had set himself up as a detective, luckily only to himself. He was getting confused. What had he expected? What was more natural than that Mrs. Mertens used to have the maiden name Weisz? Why did this person who was formerly assistant to his brother-in-law and afterward married to the druggist Mertens of Berlin concern him? Why did he think himself pledged to shield this woman?

Truly, this Mrs. Mertens was not worthy of occupying the thoughts of Samuel Finkle. But—was he really shielding Mrs. Mertens? It was in fact only Nataška, whom Gus still cared for. His Gus, whom he wished to free from the unexpressed reproach of having been attracted by an unworthy and unintelligent woman.

Yet Nataška and this Mrs. Mertens were one and the same person!

In an ill humor he pushed into the crowded subway car, worked his way among sharp hatpins and glowing cigarettes, and finally came to a stop in the crowd, firmly wedged between two tall gesticulating natives of Berlin, who were chattering away over his head. This disturbed Sam in his already hopelessly confused reflections. Mechanically he reached in his pocket, to protect his pipes from being crushed, and in so doing felt Nataška's letter between his fingers.

Certainly there was something wrong about this letter. But what?

Anxiously he held fast to this idea and tried to free it from the chaos into which all his logic was threatening to sink. "Letter—letter," he murmured to himself, in order not to forget again that connected with this letter there was something wrong, about which he had to reflect.

At Nollendorf Square he had had enough of the crowd, and he worked his way out of the car. With amazed smiles those in the station watched the slender little man who kept saying to himself "Letter, letter" very audibly while rushing away as though something hounded him on.

In exhaustion Sam threw himself on a bench. He began to review his thoughts, and again a light came to him.

"If Mrs. Mertens is identical with Nataška," he said aloud to himself, in the manner of an examiner to a candidate, "why doesn't she write to Korf from Budapest? Why does she choose this unusual detour by way of Berlin? Why does she tell about a drugstore which long since has ceased to exist? Why write these letters ahead of time at all? And who posts them in Berlin on exactly the days which are noted on the sealed envelopes? Can she have someone in her confidence here, to look after these letters?"

Again he looked at the postmark. It was that of the postoffice in Uhlandstrasse.

Perhaps it was this porter, who knew so much and whose sense of honor and propriety had required some impetus from the tax collector on the first floor to reach an ordinary and natural indignation! How could he have forgotten to make inquiries about this?

No sooner thought than done. He quickly set out on the return trip. This time he did not take the subway, the unpleasant mode of travel which confused all his ideas, going on foot instead.

In astonishment the porter beheld his visitor reappear. His reception was not excessively friendly; the stingy half-mark piece had perceptibly lowered his opinion of Mr. Finkle.

"Good Lord! What do you want this time?"

"I quite forgot to tell you my name, porter," said old Sam, determined to go the limit, "my name is August Korf."

"From Friedrichshafen?" blurted out the other in surprise.

"Quite right, porter, from Friedrichshafen. As you know, of course!" This was the man who posted Mrs. Mertens' letters. Calmly and confidently Sam continued: "You still have a few more letters from Mrs. Mertens to me. You may save the postage. I'll just take them with me."

"But I am supposed to post the letters only on certain days! Besides, how do I know whether you are really Mr. Korf?"

"How else should I know about the letters, my good man? Besides, if you will not give me the letters, the matter is not so important but that you may put them in the stove, for all I care!" With that Uncle Sam turned to go.

"Are you perhaps tired of the Mertens woman?" cried the porter maliciously. "If you tell me your exact address and what you say agrees with the address of the letters, then for Heaven's sake take the letters away! I shall be glad to get rid of them!"

Slowly Finkle turned around, named the address of his Friedrichshafen friend in a careless fashion, and then received a little package, which he stowed away in his breast pocket.

His good humor was restored as he left the Uhlandstrasse lodging house, never to see it again.

#### The Dot In The Heavens

IN the afternoon, on Potsdam Square, there was an apparently hopeless confusion of carriages, automobiles, buses, and street cars. Noise, noise, and still more noise! From the Potsdam station sounded the whistles of entering locomotives, but they could not compete with the shrill yells of the newsboys:

"*Berliner Zeitung*, afternoon edition—*Tageblatt*—*Börsencurrier*—*Berliner Zeitung*."

Uncle Sam held his hands to his ears as he crossed the busy square and turned into Leipziger Strasse. "This accursed screaming!" he grumbled. "As if there wasn't enough noise without it, on that windy corner!"

For a moment the calls of the newsboys were hushed. Apparently they were receiving new supplies of papers. But then they resounded again, louder than before.

"Extra, telegraphic despatch, *Berliner Zeitung*! Moon mystery solved! Discovery of rocket!"

Uncle Sam began to listen. The rocket discovered? In his zealous performance as an amateur detective he had entirely lost sight of the final object of his investigations, the rocket. Hastily he purchased one of these papers, still damp from the press, and scanned it quickly.

#### "The Moon Rocket Found!"

ACCORDING to an announcement of the Lick Observatory in California, at about 5 A. M. on September 9 (at noon of that day, by our time) a dot of light, with a bluish glow, was observed in the eastern sky, moving with great speed toward the moon. At the moment of observation it was about 200,000 kilometers from the earth.

"This is doubtless the Suchinow rocket, evidently exhibiting a phase of illumination as the moon does, at present appearing in the first quarter. This demonstrates that the rocket has no illumination of its own and has only become visible through the reflection of the sun's rays. This is also explained the previous failure in locating the rocket, which apparently emerged from the shadow of the earth only after thirty-five hours from the time of starting."

"Since the Lick observation is dated about forty hours after the start, and since in this time the rocket had covered half of the entire distance to the moon, the arrival at the moon might be calculated for to-

morrow morning at about five o'clock (Central European Time). It is to be hoped that the sky will be sufficiently clear for the observation of this sensational event from our Babelsberg Observatory likewise.

"In order to spare our readers a disappointment we warn them beforehand that there is of course no possibility of witnessing this event with the naked eye. Even in the gigantic telescope of the Lick Observatory, with an enlargement of more than a thousand times, the rocket appeared only as a tiny, hardly perceptible dot of light. Accordingly it will be rather pointless to look at the sky during the night with field glasses and opera glasses."

Uncle Sam slowly and carefully folded up the sheet and put it in his pocket. Then he went to a café to refresh himself, mind and body, for further activity.

It was remarkable—eighty hours from the earth to the moon! This was exactly the time required by the Zeppelin sent across the Atlantic in its voyage from Friedrichshafen to Lakehurst.

Was there perchance some one up there in that fragile object, about to visit the moon by morning?

Then his thoughts returned to the porter in Uhlandstrasse. What a shameless fellow! Yet Sam bore him no ill will, since he had furnished valuable information. Now he knew that—well, what did he really know? That Mrs. Mertens was Natalka, and Natalka Mrs. Mertens? Was the matter not actually made very involved merely through this "explanation"?

He took out the package of letters. Eight envelopes, all bearing Korf's address in the familiar strong handwriting, all identical, even to the heavy line under the word "Friedrichshafen," which was exactly repeated in width and direction. There could no longer be any doubt: all the letters had been written at the same time with the same ink.

"Fine doings!" said Uncle Sam to himself. "Writing a dozen letters at once! No wonder that nothing brilliant results. Still, it indicates energy and persistence."

Then he studied the dates written in the corners where the stamps would be placed. He was interested to note how long a time Natalka had intended these tender attentions to his Gus.

"Great! This woman actually reasons! Of course she could not break off the correspondence suddenly. That would have attracted attention. Accordingly she lets the intervals become greater and greater, and the correspondence gradually goes to sleep. Well! This Natalka is not so foolish as might be expected from the contents of the letters."

He had a great desire to open the envelopes. But he did not venture to intrude into the secrets of his brother-in-law. Korf might not like that.

"After all, I can well imagine what there is to read in them," Sam comforted himself. Then he continued with his plans. For a long time he reflected, formed schemes and rejected them, planned like the keenest criminologist, and by the time he left the café had a decision firmly settled.

First he went to a telegraph office, where he sent two telegrams to Budapest and one to Mr. Suchinow, Transcosmos, Bucharest.

After he had procured a berth on a sleeper to Vienna, he went to his hotel, told the amazed clerk that he did not require the room he had engaged, and repacked his suitcase.

Whistling merrily, he went to the Silesian railroad station.

## CHAPTER V

### A Financier's Worries

**D**OUBTLESS everyone who has visited Bucharest, that city of many bridges on the Dimbovita River, knows the Calei Victoria, the great street for loafing and afternoon meetings, as well as the world-famous confectionery store of Riegeler.

Bucharest, the Calei Victoria, and Riegeler are ideas just as inseparable as Munich, the October Festival, and the Hofbräu.

At Riegeler's there is always a swarm of people, no matter at what time of day you enter the long room. Here young ladies eat sundaes; here high-collared bankers sit, having left the near-by stock exchange for a soda; here the talkative middle-aged ladies, who seem international and are to be found all over the world, knit countless stockings and demolish mountains of cakes and sugared almonds; here connoisseurs of all nations revel in the symphonies of refined sweets, the secrets of which do not seem to escape from this confectionery store.

In Roumania everyone is fond of nibbling, even more than elsewhere, and it seems very natural for even the countryman to stay to look at these splendors. Carefully dressed, cane in hand, they sit by the hour at the little marble tables and reverently enjoy the latest Riegeler collation.

In this place, in the late afternoon of September tenth, we find Romano Vacarescu in eager conversation with the general director of the Transcosmos Stock Company, Dimitri Suchinow.

The conversation seemed to be rather one-sided. The corpulent little financier held Suchinow firmly by a coat-button, pushed him down on a chair, and spoke eagerly to him. Suchinow hardly listened; he was in a hurry. He wished to see whether there was any more correspondence in his new office in the Calei Victoria, and then he meant to go out to the observatory. The air today was clear and transparent, offering a perfect observation, which today was the more important, because during the night the rocket must enter the sphere of attraction of the moon.

He was excited and nervous, feeling little desire to listen to the lamentations of the man who cared less about the fate of the rocket than about the rise or fall of his stocks.

"One more thing, Monsieur Suchinow! Is the undertaking to be described now as halfway to success? You know, I have signed the majority of the Transcosmos stock. The last three days of un-

certainly have so affected its market value that . . ."

"Good Lord, yes!" cried Suchinow, to prevent further details. "To be sure, the rocket shows a considerably smaller velocity than I had first expected."

"Consequently. . . ?"

"Merely a longer time for the trip, if . . . ." He seemed to be seeking suitable words.

"If?" insisted Vacarescu in mingled anxiety and impatience. He moved nearer, in order not to miss a word of the inventor's explanation.

"If the rocket does not get too near the moon. But Skoryna will take care."

"But if he does get too near, what then?"

The financier bent over, close to the face of Suchinow, as though he would breathe in the reply from his lips.

"Do you suppose it possible for the rocket to strike the moon?"

"By no means. It will only be more difficult and will take time to get away from the moon again!" was the cautious answer.

"What is the percentage of probability of the rocket's safe return?"

"Are you going to calculate the future of your stocks accordingly?" said Suchinow in a jesting manner which excited Vacarescu.

"You certainly have nothing to lose by it. All you can do is gain. But my money, my dear fellow, may stick to the moon overnight. I tell you, as soon as the stock is at par, I shall let go. I have had enough of the 'shot into infinity,' and I should not care to go through these past days again." Vacarescu cried this loudly and snorted with rage.

"Calm yourself, sir! We are not on the stock exchange. Besides, you are mistaken in your apportioning of the risks. Don't I hazard losing far more than you?" said Suchinow sharply. There was a deep vertical furrow on his brow.

"Indeed!" laughed Vacarescu scornfully.

"In case of a catastrophe my whole life's work is destroyed, and—Skoryna! You forget that a human life is at stake."

"Which costs me twenty thousand pounds. Is that nothing?"

"We will not quarrel, Monsieur Vacarescu, especially now, when we may have every hope that the expedition will end successfully. Good bye, sir!"

Quickly Suchinow escaped from the fat man. He made his way among the marble tables out into the open air and hurried across the boulevard without looking around. Vacarescu, with his financial worries, was getting tiresome. There was in truth more at stake than a few thousand pounds.

### Uncertainty

**T**HE flight of the rocket did not satisfy Suchinow. To be sure, the start had taken place smoothly. Under the backward pressure of the rapidly successive explosions of the energy cartridges the torpedo-shaped space-ship had risen, its speed becom-

ing greater and greater, until after just a minute it disappeared in the clouds.

All this had taken place according to the program. Since the initial acceleration was not excessive, it could not have hurt Skoryna much. But the failure of the lighting system caused Suchinow to reflect. Apparently Skoryna had not succeeded in eliminating the trouble. And why had he sent to earth none of the radio messages for which Suchinow had waited in nerve-wracking tension? Now the rocket had long since left the reception field of the most powerful stations on earth, not to speak of the impossibility for the tiny sender on the rocket reaching back to earth. Yet in the first few hours after starting Skoryna could have sent word, which would have meant certainty as to the outcome of the shot. This fearful uncertainty of the first days had been ruinous to Suchinow's nerves.

Disappointment, as well as the distrust of the whole civilized world, did not matter to him. But what of this observation by the Lick telescope, from which could be calculated for the first half of the total distance an average speed of only 1,400 meters a second? According to his own figures the rocket would have needed to develop an average speed of 2,400 meters. With this the crossing of the equilibrium point between the earth and the moon, where gravity does not exist, would be guaranteed at about 500 meters a second. Then the free fall to the moon would take place in a weak hyperbola, and the risk of being held by the moon in a closed ellipse would be banished.

Now, however, not much more than half of the necessary speed had been produced. The fuel provided for the ascent would certainly not suffice to

carry the rocket past the limit of attraction of the earth. To what extent would Skoryna be forced to draw on the reserve supply, and would the remainder of the dynamic cartridges still suffice to pass the limit of gravity again on the return trip, to break the free fall to earth sufficiently, and to make possible a safe landing?

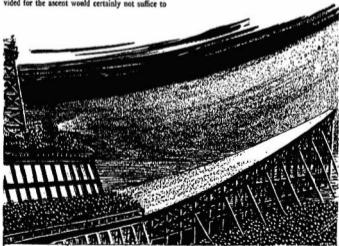
Suchinow trembled at the thought that Skoryna might overlook this tremendous danger or rashly cast discretion to the winds.

In that case there would be only two possibilities: either the rocket on the return trip would escape from the moon's field of gravity with its last energy, which would so lessen the supply of cartridges that it would fall to the earth, without sufficient braking energy, and would be smashed to bits, or else it would remain bound to the moon, circling about it as a satellite, eternally . . . .

What then?

The rocket contained food, in the form of concentrated pellets, which would suffice for months. There was also ample provision for oxygen. In the meantime a second space ship could be built to come to the rescue. But in the solitude of space, without communication with the earth, in uncertainty as to his fate, was it not absolutely certain that Skoryna would become insane? And would Vacarescu risk any more money on a second model? The Transylvania Company was out of the question, after the founding of the Transcosmos Company. After all, would not the second rocket meet the same fate as the first?

Suchinow's blood boiled. He must now not lose



Quicker and ever quicker the ship rushed ahead. After half a second it was taking the incline. It raced up the slope

with a speed many times that of an express train. In ten seconds it was past the kilometer mark. It was an over-

his calm; he'd just have to keep clear headed! Good Heavens, he simply must not break down! If only he had not yielded to Skoryna's impetuous urgings and had sent instead a model without a passenger!

Yet his fears were perhaps in vain. Surely Skoryna would have recognized his position and would avoid being entrapped by the moon. At a proper distance he could circle about it as often as he pleased. That would not require any energy or at most only a couple of discharges for steering purposes, not, of course, significant in amount. Skoryna would doubtless recognize and carry out the proper course.

Suchinow sought to calm himself with these and similar thoughts, but he was not master of his tormenting worries.

Quickly he crossed the rooms of his office on the *Cale Victoria*, noisy with typewriters and still smelling of paint and varnish. He locked himself in his private office.



Here or in the observatory he had spent the last few days and nights as well, since he could not sleep. In exhaustion he sank into the big armchair before the desk. He had several hours free, since it was at ten o'clock he was expected at the observatory.

Mechanically he glanced at the tapestries on the walls, at the pretty renaissance clock, and the huge globe in the corner. Then his head sank down, and impetuous nature compelled him to sleep.

He was roused by a gentle knock at the door.

"What is it?"

"A telegram, sir."

Carelessly he opened the envelope and read the despatch. As if in sudden terror he started up, tore into bits the innocuous little paper which seemed to have brought him unpleasant news, and strode up and down the office on the thick rug which ruffled

whirling sight. A sea of yellowish light flooded the densely packed multitude. An outburst of thunderous ap-

plause followed the space ship. As if lifted by spirit hands, the fiery figure sped obliquely upward in its mad course.

his steps.

"Damnation, there is something wrong there!" he muttered through his clenched teeth. "That is the last straw!"

With a groan he threw himself again upon the chair, picked the scraps of the telegram out of the wastebasket, and reached for his timetable.

## CHAPTER VI

### Discoveries

WHEN Samuel Finkle reached Budapest, he took one of the cabs which stood in a very long row at the station and drove to the hotel in which he had engaged a room by telegraph.

He would greatly have preferred taking a stroll by the Danube, to refresh himself after the long trip. Then he would drink a glass of Tokay in one of the café gardens near the river promenade and look across the wide blue stream, whose water reflects the fortress of Alt-Ofen and the charming villas of the Budapest magnates, rising from a sea of green. He would have taken pleasure in the vivid striking elegance of the piquant Hungarian women, who in the afternoon crowd the river district.

Uncle Sam had no time for that. There was so much to be done today, and at the stroke of six all had to be ready.

"Room forty-six!" said the German-speaking clerk of the hotel. The elevator took Sam to the second floor, while a bellboy brought his suitcase and showed him the room.

Uncle Sam subjected his lodging to a careful and detailed examination, doubtless such as he had never before given a hotel room. A small living room with an adjoining bedroom made up the "apartment" which he had engaged by telegram. The bed was miserable, the room telephone did not work, and the light switches were so badly placed that the light could not be put out from the bed. These were matters which ordinarily would have very properly displeased old Sam and have caused him to subject the price of the room to a revision.

This time, however, his demands seemed to be in other directions. First of all he was interested in the communication door between living room and bedroom, which was covered by a thick heavy curtain. The door could stand open without its being noticed from the living room.

The bedroom had no other entrance and could be reached only through the living room. Then he tested the electric light. The chandelier in the living room had four bulbs, which were controlled by a rotary switch and could be lighted singly or all together. Since only three of the bulbs were sound, however, he removed the one in the reading lamp in the bedroom and screwed it into the chandelier in place of the defective bulb.

Blinking he tried the illumination in the now fully lighted room, the bright walls of which diffused the light. After he had measured the room by pacing it, he turned off the light again and left the

hotel, evidently satisfied by his investigations.

He did not now turn to the river promenade but firmly repressed his inclination for strolling and entered a small photographic store on the square.

"Have you an *Ermanor*?" he asked the young salesman, who did not understand German and looked at him in surprise.

"Have you an *Ermanor* camera?" he asked repeatedly, noticing soon that the young man recognized the name *Ermanor*. Since Sam could make nothing of the Hungarian answer, he ran the gamut of his linguistic knowledge:

"Do you speak English—*parla italiano—parlez-vous français—sti rumineste!*"

Immediately the salesman began to speak a stumbling high school French and explained that unfortunately he did not carry *Ermanor* apparatus but that he could furnish a number of other first class makes.

"But I need a camera with very great illumination!" said Sam. "If possible, I want one with the opening 1:2!" This the man could not furnish.

He tried his luck in several stores. Finally he found a large specialty store where he obtained the desired *Ermanor* camera. He also bought some ultra-rapid plates, which he at once had placed in the holders.

Arriving again in the hotel, he so set up the camera that the lens commanded the living room, in case the curtain was pushed aside a little.

Then he hastened down stairs and instructed the porter to take to his living room visitors who asked for Mr. Suchinow or Mrs. Mertens.

"I have a little errand to do and shall be back shortly. Then can be patient for a short time and wait for me in the living room," he said carelessly, as the porter noted down the names, and then walked out of the front door.

Once outside, he circled around the hotel, returned to his room by way of the restaurant and the back stairs, switched on all the lights in the living room, darkened the bedroom, and drew the curtain across the doorway. Then he sat down in the dark bedroom beside the *Ermanor* camera and waited.

It was shortly before six o'clock. There was a crafty smile on his wrinkled face. "I hope they do come!" he thought, yawning. His old habit led him to put his hand in his pocket and draw out a half colored meerschaum pipe. He only came to realization as he was just in the act of striking a match. "Don't be foolish, Sam!" he said to himself and laid the pipe down at a distance, in order not to be tempted again.

Finkle's patience was given a hard test. For half an hour he sat in the dark, without his pipe, terribly bored. Then steps approached outside in the corridor. The door of the living room opened.

"If you please, madam, will you wait here a little while," said someone in French. Clothing rustled, and such a cloud of perfume came to Sam's nostrils that he had trouble in suppressing a sneeze. Tripping footsteps were audible, then a gentle sigh and the squeaking of the sofa springs.

## Father and Daughter

SAM cautiously peeped through the curtain. "Good Lord!" escaped him, luckily not aloud. The porter in Umlandstrasse had not said too much. This lady, dressed in the latest style of close fitting grey azzurum dress, sitting on the sofa and thoughtfully tapping the floor with the points of her patent leather shoes, was certainly a pretty little thing. Very black hair, cut short but very thick and combed straight back from her forehead, set off a white girlish face, the softness of which was sharply contrasted with the sensuous and rather pouting lips and the perfectly formed neck, which suggested a slim but very shapely figure. She had crossed her legs, and her dress, which had slipped up to her knee, revealed shapely slender legs, in chiffon stockings, the lines of which quite confused old Sam's thoughts. Of course the lady believed herself alone and unobserved, and he was getting somewhat ashamed of his unworthy position as a spy.

Was it Natalka? She certainly did not look like a woman who understood science. Sam cautiously snapped the camera. A slight click, which was smothered by the ticking of the clock, and the first step toward proof was secured. Quickly and quietly he changed the plate holder.

The lady opened her red morocco case and lighted a cigarette, the fine blue clouds of which penetrated the curtain and awakened in Sam a new desire for his pipe. "A detective has a hard time!" he reflected sorrowfully, picking up his pipe to have at least a "cold smoke."

Time passed, and the lady seemed to be getting impatient. Sam saw her take a paper from her pocketbook and read it. "Aha!" he thought with a grin. "My telegram!"

Suddenly the door was hurriedly opened, the lady uttered a soft cry, and a tall thin man entered quickly, his face strangely dotted with green. "He seems to have been gassed!" murmured Sam, remembering this type of injury at the time of the world war. "Perhaps the energy cartridges have poisoned him!"

Attentively he listened to the lively conversation which took place in the next room. Unfortunately, they were speaking a language which he did not understand, apparently Russian. That was fatal, and he tried to read some meaning in the gestures and acts of his guests.

Suchinow, for it was certainly he, hastily kissed the lady on the forehead; he seemed to be in an extremely bad temper, and his voice sounded harsh and even imperious. Mrs. Mertens twittered like a swallow, pouted, and several times pointed her finger at her head. Then they both spoke at the same time, as though trying to drown out the other's words, and finally Mrs. Mertens held the telegram before the man's eyes.

"Now's the time!" thought Uncle Sam, having his camera in readiness and snapping it just as the two quarrellers turned their faces in his direction. To be more certain, he took a second picture. Then he moved the tripod aside, put in his pocket the

holders of the three exposed plates, and peeped again through the curtain.

Suchinow was just holding the perplexing telegram in his hand and reading it!

"Expect me Friday evening six sharp Imperial Hotel Budapest. Suchinow."

Samuel Finkle came near uttering a cry of joy. Suchinow, doubtless because of the excitement caused by the telegram, was now speaking French, and both conversed in this tongue, so that now Sam was able to understand everything.

"And you believed that, you goose!"

"Oho, what you lack in politeness!" said Sam to himself with a grin, making a parody of a line in a popular piece.

"Why shouldn't I?" cried Mrs. Mertens, stamping her foot.

"You knew perfectly well that I was in Bucharest, and the telegram came from Berlin! You might have known that something was wrong!"

"That is just why I took the matter so seriously. If you are in Berlin, said I to myself, there are important and surely very unpleasant reasons!" With a smile the slim piquant creature added: "Besides, my dear sir, didn't you get caught by the same trick?"

"You may be sure that I should not have crossed the Carpathians unless I by chance had business at the Magyar Bank here."

"What simply charming logic!" said Mrs. Mertens, dancing a few shimmy steps. Then she took a small comb from her pocketbook and calmly rearranged her hair before the mirror.

Suchinow walked up and down thoughtfully. He seemed to be undergoing some inner struggle, and the most vivid anxiety appeared on his careworn face.

"Then the other telegram is not from you?"

"No!—Besides, you are looking very poorly, father; you ought to take things easier," warbled Mrs. Mertens.

Uncle Sam rubbed his hands. "Did she say 'father'?" The mystery was beginning to become clear.

"Quit that silly talk; I have something to think about besides my complexion. Have you still the letters for Koef?"

"I left them in Berlin, in a safe place."

"With whom?" asked Suchinow curtly.

"With our former porter."

"Does the man know . . . ?" said he, while his glance was threateningly directed at his daughter's pretty eyes.

"Nothing from me, anyway," she answered snippily.

"From whom else, then? Doubtless the man has betrayed something. That comes from trusting silly women."

"My dear father, I did not ask to be trusted. If you are not more polite, I shall simply leave you here and go. What do I care about your whole business? Don't bother me with your mysterious activities."

Mrs. Mertens, still occupied at the mirror until this moment, now executed an elegant turn on her heel, put her hands in the little pockets of her coat, and looked imperiously at her father.

Uncle Sam was soory for the man, as he relentlessly walked back and forth, cudgelling his brains to get on the track of the sender of the telegrams. "Don't take the trouble, sir!" he thought, as Suchinow picked up the telephone, only to throw it back on the hook again angrily, after several attempts to get a connection.

"The porter must know who occupies these rooms," he said, gnashing his teeth. "Woe to the fellow who has dared intrude in my affairs! Let us go; there is nothing to be learned here."

Sam waited a while longer, after they had gone. Then he crept out from his hiding place, put out all the lights, and left the hotel by way of the back stairs and restaurant. His first visit was to the Ernemann store, the work-rooms of which were fortunately not yet closed. They shook their heads at Finkle's demand, on which he absolutely insisted, that the three plates must be developed and printed this very night.

"The prints will not even be dry in this short time."

"Then I shall simply take them wet, and it will be all right. They must be delivered in my hotel to-morrow morning by seven o'clock. Please keep the plates for me carefully. If I desire any more prints, I shall write."

He was unwilling to be put off by evasions, and he managed to obtain the promise that his work would be performed.

Sam breathed easier when he had left the store. He had done enough for today, and he was satisfied with his success. In youthful exuberance he spread out his arms and cried: "Now, you merry city of carefree pleasure, now I can see you!"

## CHAPTER VII

### A Confession

IT was long after midnight when old Sam returned to his hotel. The porter, sleepy-eyed and yawning behind his hand, informed him that a lady had come in the evening, who asked for Mr. Suchinow, and soon afterward a gentleman, who asked for Mrs. Mertens. They had waited a rather long time. Later the gentleman had come several times and had insisted on seeing Dr. Finkle. The porter had pointed out, however, that the Doctor had gone out shortly after five and had not yet returned.

"Unfortunately I was detained by various business affairs," said Sam, well pleased. "Is the gentleman coming again?"

"I believe so."

"Very well, please inform me as soon as he is here."

The porter doubtless had his own ideas about the business which had detained him after midnight,

but he wisely kept them to himself, only betraying them by a slight smile.

During the night Sam did no more thinking and planning. He had hardly pulled the bed clothes up around his neck, when he fell fast asleep. The heavy Tokay wine had done its work.

The sun was high in the heavens when he awoke the next morning. It was almost ten o'clock. He hastily jumped out of bed and dressed himself. On the table was a great yellow envelope from the Ernemann store.

"Then there really wasn't such a hurry," he thought, "since Mr. Suchinow does not seem to have been here yet. But it is best to be ready!"

He opened the envelope and made an enjoyable examination of the pictures. They had come out well, sharply defined and sufficiently lighted. It made a really comic impression on him to find that one picture, showing Mrs. Mertens and Mr. Suchinow at the height of their quarrel, depicted the lady, obviously very excited, holding a piece of paper before the eyes of the man, while her other hand hung in the air in a violent gesture. The perplexed face of Suchinow was very funny.

"Humor is necessary!" philosophized old Sam, as he rang for breakfast.

Meanwhile Dimitri Suchinow was coming up to the porter in the lobby.

"Can I now see Dr. Finkle?" he asked brusquely.

"Certainly," the porter hastened to reply, "he is expecting you. I shall immediately inform him of your arrival."

"He is expecting me?" muttered Suchinow, taking a seat in a corner of the almost empty lobby. "The shameless man!"

Sam appeared only after some time. He could not deny himself the pleasure of having a little revenge for the long wait the previous day in the dark bedroom.

He went straight up to Suchinow. "Mr. Suchinow?" said he.

"You know me?"

"Yes, indeed!—I am Dr. Samuel Finkle," said he, by way of introduction. For a while the two adversaries looked fixedly at each other. Suchinow tried to hide his worry and excitement by a rough manner, whereas Sam showed himself as sociable and unconcerned as ever, and his manner did not indicate that he was enjoying himself very much.

"Shall we not sit down?" asked Sam politely. "I think we have all kinds of things to say."

"Our conversation can only be very brief, sir. What right have you to meddle with my affairs? Your silly jest with the concocted telegrams has cost me two days, two precious days which cannot be replaced. I demand an explanation and satisfaction!"

Suchinow spoke quickly and sharply, and there was a threatening flash in his dark eyes.

"I am ready for any satisfaction, sir!" replied Finkle calmly. "I advise you, however, to lower your voice a little. Things might be mentioned which for your interest had better remain heard



only by ourselves."

Suchinow grew a trifle pale.

"What do you mean?" he burst out. "I beg you to . . ."

"Mr. Suchinow!" Sam interrupted him quickly. "Shall I send this photograph to Mr. August Korf in Friedrichshafen?"

The name of Korf affected Suchinow like a blow. With trembling hands he took the picture which Sam held out to him. Then he sank with a groan upon a chair and pressed his hands to his temples.

Sam waited quietly until Suchinow slowly raised his head again. He was startled by the pale face and fevered eyes.

"You spied on us," he said feebly; "that is infamous!"

"We will not argue as to whether this was infamous or not, sir!" said Sam politely, almost cordially. "Proper and infamous are relative ideas, regarding which opinions may be very different. Anyway, I know just how matters stand!"

"What are you going to do?"

"That depends on you, sir!"

"What do you desire?" asked Suchinow quickly, and a ray of hope crossed his face.

Old Sam himself did not know what kept him from crushing this man, who doubtless had a theft on his conscience.

"You are mistaken as to my identity. I am Korf's brother-in-law."

Suchinow sank back again, a picture of hopeless despair. "How did you learn that I was connected with Mrs. Mertens?" he said softly.

"Through a postage stamp which was badly stuck on," replied Sam. Then he added: "Mr. Suchinow, are you willing to answer a few questions for me?"

"Go ahead and ask!"

"Do you give me your word of honor that your replies will be the exact truth?"

"My word of honor?" asked Suchinow, mockingly. "Can my word of honor still signify anything to you?"

"I see in Mr. Suchinow not a villain but a man who has been the prey of his own immeasurable ambition," said Finkle calmly, watching the effect of these words. Suchinow bit his lips.

"Good! I give you my word of honor! Just ask!"

#### A Word of Honor

FINKLE waited a while, in order to arrange his ideas. He could not conceal from himself the fact that he pitied the careworn haggard man, ambitious and doubtless talented, now witnessing the ruin of his hopes and the complete failure of his life's work when success seemed just at hand.

"Mrs. Mertens is your daughter?" he began the inquiry.

"Yes."

"But her maiden name is Weiss, not Suchinow?"

"She bore the name of her deceased mother, a movie actress of Budapest, who was never my wife."

Sam was pleased with the frankness with which Suchinow touched on so delicate a theme.

"The correspondence with Korf doubtless was intended to keep him from further investigation, was it not?"

"This question I cannot answer."

"Very well. Here is something else. Is the rocket carrying any persons?"

"An engineer named Skoryna, a close connection of mine, is guiding the machine." Sam thought that at these words he perceived unfeigned sorrow in the expression of the Russian.

"How is your undertaking financed?"

"By the Transcosmos Stock Company, the founder and chief stockholder of which is the Roumanian oil magnate, Romano Vacarescu. But why do you ask questions about things which are common talk in Bucharest?"

"It is more convenient for me to get information directly from you. Besides," said Sam with a smile, "you probably would hardly answer other questions."

Suchinow did not reply, and Sam continued:

"What will be the financial consequences for Vacarescu in case your rocket comes to grief?"

"The shares of the company would then be as good as valueless, that is obvious. Besides that, the insurance deposit for Skoryna would be due. Vacarescu has opened an account at the Magyar Bank, from which twenty thousand English pounds are payable if Skoryna's death is demonstrated or if the rocket does not return within a year from the start."

"Payable to whom?"

"That is something I do not know. Skoryna has deposited the disposal of this sum under seal in the Magyar Bank."

"And if the rocket returns safely?"

"Then Vacarescu is practically the sole owner of the first space ship company in the world. The value of the enterprise would rapidly increase."

"And you?"

"I am and remain the technical head of the Transcosmos Company."

Uncle Sam arose, satisfied with what he had heard.

"Thank you for your information, Mr. Suchinow. I should like to make you a proposal, not unlike a truce. I cannot promise to regard the entire affair as closed, but I am willing to refrain from making matters public so long as you do not interfere with my undertakings and remain absolutely neutral, whatever may happen. I do not need to point out again that I have means of countering immediately and effectively any intrigues on your part. Nevertheless, I ask for your word."

"My word, sir," said Suchinow calmly. For an instant the two men gazed at each other. Then Finkle bowed slightly and withdrew. He had the conviction that the Russian would keep his word.

Suchinow remained a while longer, deep in thought. Then he suddenly jumped up and hastened away madly. An auto took him to the flying

field, where the Aero-Union plane was just getting ready for the flight to Bucharest.

Three hours later he was entering his offices in the Calt Victoria.

### CHAPTER VIII

#### The Drive Begins

THE drive for money to construct the Korf space ship was started. In all the papers appeared warm appeals, written by Director Heyse, calling to mind the fate of the *Graf Zeppelin* and addressed to the national spirit of the country.

On the occasion of the meeting of the Society of German Engineers, Heyse (who was a member of the board of directors) took the opportunity to make an impressive appeal on behalf of Korf's project, closing with these words:

" . . . The Dirigible, the *Graf Zeppelin*, years ago spread over the whole earth the fame of German spirit, German technique, and German work, so that our former enemies recognized that this nation was alive, despite all suppression.

"And now the lofty music of German ability shall resound to the canopy of stars—in distant unknown worlds the German colors shall shine and announce that this nation lives!"

A thunder of applause stormed about the speaker, whose heart became light, while inspiration carried him away.

But it is quick work for the dullness of every day to swallow up the inspiration of a festival occasion. It is one thing to be present at a festive gathering, in evening dress and starched shirt, listening to a speaker with enthusiasm, as he says, "We will be a united nation of all brothers!" But it is quite another to sit in an office, in shirt sleeves, behind a heap of unsettled law papers, wishing some Meier or Huber (who found something missing in the last delivery) carried off to the place where pepper grows.

To be sure, Heyse's appeal had not been without effect. But many a patriot of the drinking table, actually overflowing with enthusiasm on occasion, felt Heyse's words deep in his heart and still seemed to find an unavoidable hindrance to subscription in the shape of an unfilled pocketbook.

Funds came in slowly and weakly, in very small amounts, though all the larger newspapers had come to the aid of the enterprise, opening and publishing lists of subscribers.

Nevertheless, Korf was not deterred from starting the construction. He hoped that greater sums would come in from somewhere. Councillor Heyse tirelessly showed the Stuttgart officials in detail how much the great construction at Lake Constance would enliven the dull demand for labor, giving hundreds who were out of work at least temporary employment and pay. Promises were made to keep it in mind, to talk it over with the representative of the central government; they would see what could be done. But for the moment that was all.

The failure of the public to subscribe was due in

part to the uncertainty as to the success of the Suchinow rocket, which was everywhere the usual topic of conversation. They were too much inclined to identify the space rocket with Korf's space ship.

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The great mathematics lecture room of the technical college in Munich was full to overflowing. The audience sat packed in the long rows of seats, people crowded the aisle, and hundreds had to turn around again on the stairs, since it was impossible to find even the smallest standing room in the great hall.

August Korf was speaking of the problem of spatial navigation and its solution.

On the platform stood the broadshouldered man whose name had been so often mentioned. His clear, grey eyes surveyed the gathering, while between his fingers was rolling a piece of chalk. He calmly waited until the unrest in the hall was stilled.

Then he began:

"Ladies and gentlemen! The rocket of the Russian engineer Suchinow has shown mankind that a trip to the moon has been removed from the realm of fiction and made reality."

There was absolute stillness in the auditorium. As though enchanted, all eyes were on the speaker's lips.

"The shot into infinity is nothing absolutely new. Decades ago eminent physicists busied themselves with this problem and indicated its solution as perfectly possible after the overcoming of a few technical difficulties.

"The first and simplest projects of this sort depended on sending a body from the earth at such speed that, passing the field of attraction of the earth, it would not fall back again upon our planet. But this idea had to remain impossible, except in phantasies of the Jules Verne type, since the entire necessary speed of not less than twelve kilometers a second would have to be given such a shot right at the start. Quite apart from the fact that no living creature can endure such acceleration, even the construction of such a giant cannon belongs in the realm of fancy.

"A serviceable means is provided by the rocket, however, whose effect depends on the recoil of explosion gases flowing with great force through narrow exhaust pipes. The motion of the rocket is not caused by the fact that the gases issuing out push on the air; on the contrary, it is based on the purely mechanical law of the maintenance of the centre of gravity. This is the same law which conditions the recoil in the case of fireworks. Accordingly, the rocket principle does not fail to act in airless empty space but on the other hand develops its greatest efficiency right there, since air resistance and earth attraction alone hinder the motion of the rocket."

#### Korf's Appeal

KORF then covered the two great blackboards of the lecture hall with sketches and formulas, by which he explained the operation and construction of the space rocket.

"You see," he went on, "it is perfectly possible to send a rocket relatively slowly from the earth. That is, the acceleration will be such that the human system can endure its pressure. Since the amount of fuel to be taken along is limited by the practicability of the apparatus; everything depends on the kind of fuel and its latent chemical energy.

"My earlier experiments showed that a certain mixture of powerful explosive powder produces an intensity sufficient to carry a properly constructed rocket beyond the limit of gravity, provided the machine is very quickly (in little more than a minute, that is) brought from the condition of rest to the necessary speed of twelve kilometers a second. In this case the acceleration pressure becomes effective, completely excluding the carrying of human beings or at least subjecting the lives of the crew to this extreme utmost risk. Prolonging the time of the start would certainly remove this danger; it would, however, naturally have the result that the rocket would have to struggle so much longer against the field of gravity of the earth and would be compelled to use up its fuel before attaining the speed necessary for finally passing from the earth's field.

"Whether Mr. Suchinow has been able to strike a satisfactory balance between these two possibilities, I do not know.

"Things are otherwise with my space ship. . . ."

A stir which ran through the hall caused the speaker to wait a few moments until the multitude was absolutely silent again. Then he continued:

"To be sure, the machine which I have planned depends also on the rocket principle. Yet after long struggles and missteps I have finally succeeded in making an arrangement using liquid fuel as a source of energy instead of powder energy cartridges. Therewith the problem of conquering the solar system has come an immense stride closer to realization. For my combination of hydrogen, alcohol and oxygen affords per kilogram almost three times as much energy as the same amount of the best available nitrocellulose powder, the expulsion speed being over 5,000 meters a second.

"And it depends on this alone."

Again there was a whispering among the hearers. After the previous explanations it was clear to everyone what this fact meant for the safety of the crew, indeed, that by this means the entire question of spatial navigation was for the very first time approaching a satisfactory solution.

With satisfaction Korf observed the impression produced by his announcement. He continued speaking for about an hour more. Forcefully he tried to convince both the public and the scientists of the practicability of his ideas and to stifle at the start any possible doubt by giving unquestionable calculations, keeping secret only the final details of construction.

"Ladies and gentlemen, I am drawing my talk to a close. The first aim of my space ship is the encircling of the moon. It is, however, no longer doubtful that with the machine which I have ex-

plained, actual cosmic speeds may be attained, sometimes making use of the field of gravity of the sun. And we may rightly hope that in no distant time it will be possible to pay comfortable and safe visits, within travelling times possible for human beings, not only to our nearby moon but also to the neighboring planets Mercury, Venus, and Mars—perhaps even to Saturn with its rings, perhaps to distant Neptune itself."

As Korf closed his remarks with a brief bow, there was a moment of oppressive stillness in the hall. Then it was like the coming of a storm. The floor shook beneath the stamping of the college boys, a mad clapping of hands expressed thanks to the great inventor, there were shouts of "Hurrah for Korf!" and the entire crowd pushed toward the platform to carry Korf from the hall on their shoulders.

Then the Swabian arose with flashing eyes, commanding silence by a wave of his hand. His clear voice rang out through the hall:

"Women and men of Germany, I thank you for your enthusiasm! Yet demonstrate it not by words but by deeds! All help out, so that the space ship may not remain a mere project. Help out, so that it may be a secure possession of our sorely tried country!

"I have sacrificed my property to it. I am standing here a beggar! Now it is your turn!"

Silence prevailed as Korf left the hall. Yet in hundreds of eyes he saw understanding shine forth ready for action; understanding, which gave him new courage to continue working without hesitation on his great task.

## CHAPTER IX

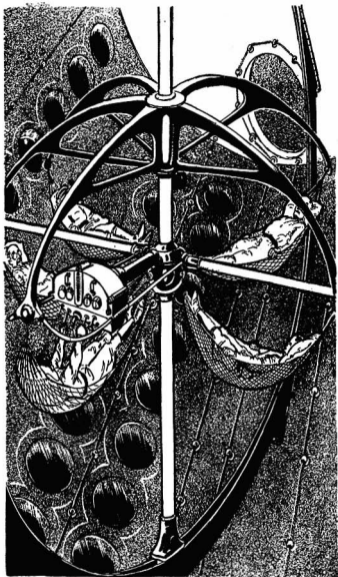
### Finkle Investigates

**D**R. FINKLE, meanwhile, had not passed the time idly. He had remained several days longer in Budapest and had made some discoveries about the Mertens couple.

It became more and more mysterious to him how Korf had been attracted to this woman and had been able to think her a serious scientist. Even if the hateful remarks of the Berlin porter were perhaps exaggerated, there was no question that Mrs. Mertens, now successfully appearing as *première danseuse* and leading a very gay life, had no interest for anything but clothes, new dances, costly dinners, and numerous cavaliers. Gus must have been smitten blind when he took this society creature as an assistant.

From German papers, which Sam purchased, he learned of the commencement of the drive for funds for Korf. He also found a full text of the Munich lecture. With great interest he followed the daily reports about the course of the rocket, now circling about the moon.

"Will it return? Is it held fast by the moon? Is the occupant still alive? Will it be wrecked on the return trip?" These were questions appearing day after day in the press and dealt with more or



Kerf gave full gas to the main exhaust. The thunder of the explosions increased, becoming a roaring and crackling. The acceleration indicator crept up the scale and wavered at the point twenty.

less logically. The outcome of the "shot into infinity" was still uncertain when Sam left the merry lighthearted city on the Danube to pursue his plans further in Bucharest. He had not yet sent any news to Korf.

Finkle chose the roundabout route via Hermannstadt, in order to look around a bit in the Olts Valley, before honoring Mr. Vacarescu by a visit.

In Calimanesti he left the slow train which thrice daily snorted its way through the narrow valley from Hermannstadt to Slatina at not more than a snail's pace. Vainly he looked about for a carriage. There was nothing to be done but go on foot the several hours' journey by way of Berislavesti to Suciia. He took his time and had much enjoyment in the gloomily majestic landscape, in which there were no little hills and slopes, the darkly wooded Carpathians rising steeply from the valley and mounting up to heaven.

In Suciia he derived considerable benefit from his slender knowledge of Roumanian. Cautiously he questioned the dirty mountaineers, wrapped in sheepskins in spite of the heat, like that of a belated summer. They had not yet recovered from the terror caused by the thundering rocket. With evident horror they told in a mixture of Roumanian and Hungarian about the devil's work on the plateau. The earth had been torn up, a hellish glow had flooded the mountains, and everyone had thought it the end of the world.

"You know, master," an old ragged cowherd whispered to Sam, "things weren't right up there. The devil himself was taking a hand. Just think, when the devilish noise was over, the heavens were covered with thick clouds, for weeks there was grey mist in the valley, and . . ."

"That's nothing remarkable!" laughed Sam.

"Don't jest, master! The mist was nowhere from Cainenli to Slatina, only here in the neighborhood of the bewitched plateau. And it wasn't any ordinary mist. It was made of dense heavy gases, hot as beef stew—and . . ." he brought his mouth close to Sam's ear and whispered, "it smelled like pitch and sulphur!"

Sam remembered that Korf had once told him the entry cartridges were filled with powder, which on exploding evolved an extremely evil smelling gas. It was right; he had at the same time mentioned that the rocket on starting left behind a stream of such superheated combustion gases that it was advisable to start the machine in some place not densely populated.

"Can one see the works at the Valeni monastery?" he asked.

The old man crossed himself. "For the sake of your soul's salvation, master, do not go there! No Christian now enters the valley of Valeni, where at night the poor souls have to work for the devil."

In spite of this insistent warning, Sam walked to the monastery along the road which had been softened and cut up by heavy trucks. The villas on the side of the mountain seemed abandoned. The cable line hung motionless and unused across

the valley. In the monastery yard a few people were busy piling up great steel containers. Unchallenged, Sam passed through the gate and watched the workers a while. As though in sport he picked up one of the empty steel cases which lay about, looking somewhat like shrapnel cases and containing about a liter.\*

"Can I see Mr. Suchinow?" he suddenly asked. In surprise the workmen, who had hitherto turned their backs to Sam, turned around and stared in wonder at the intruder. Since he received no answer, he repeated his question in French, likewise getting no response. "Suchinow?" he then said slowly, stressing each syllable: "Su-chi-now!" He also made a questioning gesture.

"Suchinow?" repeated one of the workmen. "Suchinow Bucharest?" And he pointed to the south.

Without concerning themselves further about the visitor, they again returned to their work.

Sam climbed up to the plateau.

Tall massive concrete pillars rose in the air, enclosing a deep circular excavation in the earth, which was half full of mud. Clumps of earth lay scattered all around for a great distance, as though an immense bomb had burst in the space surrounded by the pillars.

Utterly exhausted, Sam reached Calimanesti that evening. Fortifying himself with some corn bread and plum brandy, provided him by the station master, since there was no restaurant, he continued his journey on the night train.

In Bucharest he had a real sleep before continuing his investigation, which now was chiefly concerned with the financial basis of the Transcosmos Stock Company. It did not prove difficult, by way of cautious questions at the leading banks, to find out that Vacarescu had in his own hands about sixty percent of the entire capital stock, the remaining forty percent having been taken over in equal amounts by two Bucharest financial interests, the Transylvania Company, and the Bank of Roumania. Since Vacarescu first of all had reckoned in his expenditures in building the rocket and from the remaining actual funds had provided the insurance sum for Skoryna, the shares were evidently worth at most sixteen percent, in case the rocket should come to grief and Skoryna be killed.

"A risky business!" remarked Finkle to the head clerk of the bank, who gave him this information.

"Yes, the stockholders risk a great deal!" the latter agreed. "Doubtless many would rather sell below par to-day than tomorrow. Still, if the venture succeeds, then the stock will rise."

"Well!" said Uncle Sam. "How would it be if the Transcosmos Company encountered competition which would settle its fate, even if there were the most successful outcome for the rocket enterprise?"

With these words he passed through the window the newspapers with information about Korf's project.

"The construction of Korf's space ship has com-

\* (1,000 cubic centimeters)

menced. Don't you think that it can at least be very injurious to Vacarescu's undertaking?" Sam added, while the banker scanned the news with increasing interest.

"Thank you very much, sir, for your hint. May I make further use of it?"

"You are very welcome. You will be able to get further information in any German or Austrian paper. The papers here seem to be showing extraordinary reticence regarding this coming event."

#### Confronting The Financier

FINKLE was also able to secure access to the managing office of the Transsylvania Company. He freely admitted that he was connected with Korf and wished to get information regarding the basis, plans, and further intentions of the Transcosmos Company. He firmly denied the suggestion that there might be some interests in common.

Thus he slowly but surely undermined the value of the Transcosmos stock, and the confidence of the shareholders was again destroyed. The reports from the observatories did the rest. It seemed more and more certain that the rocket was permanently circling about the moon. Whether this was intentional or forced was a question which all the observers considered but which none dared to answer.

When Sam thought the preparations sufficient, he went one day to the little palace on the Dimbowita, Vacarescu's home in the northwest quarter, where the villas of the rich of Bucharest are to be found. He was received with a polite but unmistakable shrug of the shoulders. Mr. Vacarescu was not at home. Twice more he tried it, after which he lost patience.

"Mr. Vacarescu is accustomed to be at home at this hour!" he said to the liveried servant. "Announce me again and say that it is a question of something extremely important for your master, something allowing no delay. Give him this card." He then drew out a new visiting card and wrote a few words on it in pencil. After a short time the servant reappeared.

"He will receive you tomorrow noon in the office of the Transcosmos Company!"

"Fine!" grumbled Sam. "One day shall not stand in the way."

The following noon Sam was promptly in the Calei Victoria and was at once admitted.

Vacarescu was sitting at the desk in Suchinow's private office. He was alone. Sam was much pleased to be able to converse alone with the noted financier. At first no notice was taken of his entering.

"What do you want?" Vacarescu asked after a while, without turning around.

"First of all, a seat!" answered Sam angrily. He was always roused by impoliteness.

Vacarescu slowly looked up from the desk, his thin nose trembling strangely. With boundless amazement he gazed at the man who dared confront the oil magnate Romano Vacarescu in such a way.

"You speak boldly, sir!" he said with a drawl, making however a gesture toward the sofa.

"I am accustomed to politeness!" said Sam calmly, sitting down.

"Who are you and what gives me the pleasure of your visit? Please make it brief. I do not like verbosity."

"My name is on my card. I invite you to open an unconditional account for a German inventor."

Vacarescu's lids lowered, and he reached for the bell.

"Sir," said Sam quickly, "you can have me thrown out. But I assure you, very soon you will be asking me to visit you, and I likewise assure you that I shall not return a second time."

The fat fingers with the many rings slowly withdrew from the bell.

"Well, then, what do you want?"

"A loan, as I already told you."

"And the security?"

"The word of an honorable man."

"Won't you express yourself more concretely? You are beginning to weary me. For whom do you desire the loan—for yourself, maybe?"

"For my brother-in-law, August Korf."

Vacarescu looked up quickly, interested.

"For the Swabian inventor?"

".....of the space ship," added Sam by way of supplement.

"I am amazed at your strange request. Do you know that you are speaking to the founder and chief stockholder of the Transcosmos Space Ship Company?"

"..... who is risking a fortune in it, and whose only mistaken speculation, perhaps, is the Transcosmos Company."

"You seem very daring, sir. If you seriously wish to suggest that I again take part in such an undertaking, please do not waste your time any longer."

"You are mistaken. There is no question of your taking part. I want merely a loan, an unconditional loan due only at the end of five years. We can come to an agreement regarding the interest."

"Is this why you came from Friedrichshafen to Bucharest?" Vacarescu seemed amused.

"Certainly!"

"You might have saved yourself the expense."

"We shall see. First let me give you some advice. It would be advantageous for you to buy up the forty percent of the Transcosmos stock which is in other hands."

"I suppose you know from some reliable source," said the fat man scornfully, "that the flight of the rocket will result absolutely satisfactorily, isn't that so?"

"On the contrary, I am absolutely convinced that the 'shot into infinity' is dying away without effect," said Finkle, while the twitching at the corners of his mouth showed his meaning still more.

"Stop!" he added, noticing that Vacarescu was again reaching for the bell. "My mind is perfectly clear, and I know exactly what I am saying."

## For or Against Korf?

THE Roumanian drummed nervously on the table. "You are putting my patience to a hard test. If I still listen at all, it is only because I am really eager to know how you intend to make this tissue of absurdity at all plausible."

"Patience brings its reward, says an old German proverb, the accuracy of which you will at once perceive."

"Speak to the point, if I may ask?"

"All right! If the rocket comes to grief and the insurance sum for Skoryna has to be paid, the assets of the Transcosmos Company will be so reduced that the shares can be valued at not more than sixteen percent."

"You have exact information?"

"As you observe! In this case you lose about eighty-four percent of your investment."

Sam would not be turned aside.

"Surely! For to-day you can get the shares of the other investors for not more than seventy percent of par; if you proceed carefully, they will be cheaper! Thereby the average cost of your total investment would be reduced from one hundred percent to about eighty-eight."

"Correct! What then?"

"Now, assuming that the rocket is still safe and Skoryna alive, you can so manage by liquidation of the company that you lose nothing."

"But man!" cried Vacarescu impatiently. "In that case I have no idea of liquidating!"

"Under certain circumstances you will have to have this idea, Mr. Vacarescu! But let us leave that for a moment. I repeat: if Skoryna is alive and you follow my advice, you will not lose a penny. Now, you are doubtless aware of the course of the rocket to date. In all probability it will keep on circling about the moon until—please excuse me if I light my pipe—it makes talking so much better—"

"Until it . . ." insisted Vacarescu.

"Until it is reached by Korf, and Skoryna is rescued, and thereby the payment of the insurance is avoided."

Vacarescu was silent for a long time, while Sam comfortably blew thick clouds of smoke into the air.

"Then I am to risk further outlays to save my previous investment—you really mean that?"

"You have understood me perfectly. Besides, there might not be any excessive risk in it. Listen!"

Sam unfolded a few newspaper pages and translated to the attentive financier the reports of Korf's lecture at the technical college in Munich.

"Don't you think," he added, "that work is being prepared here to which your company must surrender?"

"Man, don't you consider," cried Vacarescu in excitement, "that you are asking me to finance my most dangerous rival—assuming that all this is correct—and to finance him unconditionally?"

"Mr. Vacarescu!" said Sam, rising. "Consider well whether you are willing or unwilling to seize

this solitary chance to save Skoryna and to withdraw without loss from your enterprise. In brief, this is the question: with or against Korf! Since I may doubtless assume that you will wish to discuss this decision with General Director Suchinow, as I strongly recommend, please give Mr. Suchinow this package. He will surely give you the right advice. I shall wait until tomorrow evening for news of your decision as to the main point. The further details are entirely subordinate."

"Good-bye, sir."

Sam departed, and when the outside door had closed behind him, he laughed so loudly that the passers turned around to look at him.

The package contained the empty energy cartridge and the Budapest photograph of Suchinow, on the back of which Sam had written these four words:

"For or against Korf?"

## CHAPTER X

## The Call from the Skies

MR. NIELSON, the aged observer of the Lick Observatory, had pointed the telescope exclusively for studying the rocket. Night after night he sat at the eye-piece and did not let the space ship escape his vision.

The conflicting emotions which stirred within the old investigator had brought him into a strange state of mind. However perfectly he could follow with his own eyes the rocket at night, however exactly he calculated its path on the basis of the construction figures which Suchinow had now published, he nevertheless simply could not believe that man could safely dare to leave his place on earth, appointed to him at creation, and force his way into the secrets of infinity. Though he convinced himself every night that the rocket was pursuing its course without deviation, it had become absolute certainty to him that the bold man who was circling about the moon up there in space, separated from his fellow beings, out of reach of any communication, must be dead.

On the fourth day after the start, the tiny dot of light appeared at the distance of a few diameters of the moon northwest of the now fully illuminated disk. Then it seemed to approach nearer and nearer to the moon, touching the disk, and then disappearing. Some ninety minutes later it appeared again at the southeast edge, made a very narrow loop, and again entered the disk at the southern end. The rocket had gone around the moon and was now passing in front of the disk.

Since this procedure was repeated at equal intervals, the assumption was that the rocket was circling about the moon in a regular gravitational path. Exact measurements gave an orbital time of three hours and six minutes, with a distance of two thousand five hundred kilometers from the centre of the moon. The moon therefore had acquired a tiny satellite of its own in the shape of the rocket which

was travelling just eight hundred kilometers above its surface.

Not the slightest irregularity in the motion indicated that human hands were involved and that the rocket was travelling its cosmic path as a space ship capable of being steered; rather than helplessly like a meteor or one of the tiny asteroids.

Weeks passed. The orbit of the rocket remained unchanged, and Nielson thought it impossible that a heart should be beating and a brain thinking up there in that tiny fragment of the earth. He was therefore all the more startled by a new and unexpected observation.

In the fifth week after the start, when the moon had again become full, the shadow of the earth came so close to the moon that the rocket, though not the moon itself, entered the shadow and disappeared.

Mr. Nielson was just going to leave the observation place, since the rocket would be invisible for some time, when he saw—was he mistaken or was it reality?—a weak, scarcely perceptible glimmer, a dot with a red glow. In truth, the rocket was illuminated without sunlight.

In excitement Nielson adjusted the telescope to the greatest enlargement. There could be no doubt! The space ship was artificially lighted from within.

The light went out, shone again, flickered, and again went out.

"Good Heavens! The man is still alive, still alive, all alone out there in the void!"

The assistant rushed up.

"Do you see the gleam of light?" asked Nielson, as the other scanned the heavens. He had grown pale and was trembling with excitement.

"Yes, sir, but the light is not steady. It is constantly switched on and off. What is that? Short—short—long—short—long? Mr. Nielson, it is—it is the Morse code. It's a message from space. Here it is again: short—short—long—short—long! Sir, it is the international Morse call-signal."

He actually shouted it.

Nielson clutched his breast, as though he would quiet his wild heartbeats.

"Write, sir—for Heaven's sake be quick—perhaps this is the only observatory which will get the call from the skies. Let me look, sir; my eyes are younger than yours! Again the call-signal. Now comes a word! Are you ready to write, sir? Short short short—long long long—short short short . . ."

Hastily the old scientist noted the dots and dashes with trembling fingers. Then the assistant sank back, deathly pale, horrified.

"What is it?" cried Nielson.

Freely the assistant stammered: "S-O-S!"

"Great Heavens! The international call for help! Ship in distress!"

S-O-S, S-O-S, S-O-S cried the flashes of light from space, from an infinite and unattainable distance.

For a quarter of an hour the call was repeated. Then the dot of light by the moon went out. The

rocket emerged from the shadow of the earth and once more shone in the reflected sunlight.

Silent and shocked, the two men looked at the paper, at the momentous dots and dashes. They had heard a message from space—the cry of a human being in an agony of despair.

Send help—help!

Who was to help him out there in the void?

In a few moments the radio transmitter was busy. Skoryna's cry went around the earth and roused the better feelings of mankind.

## CHAPTER XI

### Near Despair

THE construction work at Lake Constance went on only slowly. First the Victoria Airport had secured an unoccupied piece of land beside the lake and had started the preparing of the ground.

A slope rising from the shore offered a good natural foundation for the starting track. Massive girders were erected in the depressions, the irregularities of the ridges were leveled off, and the natural and artificial supports so obtained were joined by great iron rails.

Thus resulted an absolutely straight runway, twelve meters wide and almost two kilometers long. It ran horizontally for a few hundred meters from the future starting point, then gradually rose, ending like a spring-board at the highest point of the slope, the gradient being thirty percent.

Daily Korf inspected the work for hours, making tests of the solidity of the foundation and investigating the quality of the concrete in his laboratory.

Then the construction had to wait a while, until enough funds had again come in to procure materials and pay the workmen. There was constant worry, until the day came which was to rid Korf of his cares.

It was already well along in October.

The mist came up from the lake, settling heavily on the fields, dulling the bright colors of the autumn woods, and veiling the sun from sight. The two greys of lake and air blended to make a sea of cold moisture. The steamers, seeming of an uncanny size, only loomed up out of the mist when right at the shore; they took on board the few passengers waiting and freezing on the slippery pier, and then disappeared again in the mist in a few minutes.

With the departing swallows there had also gone the last summer guests who sought to refresh themselves at Lake Constance. Silence lay over the little city, which was preparing to dream away the winter. In the wide-tiled stoves of the Swabian living rooms, baked apples and chestnuts were already cooking, the odor of which is a part of the real autumn evening. The last bit of warm weather came again, and the mist timidly crept away before the victorious sunbeams. The sky was a clear blue arch above the lake and the mountains, and the white sails once more sped over the water, taking



final farewell of the light and warmth of summer.

It was on such a clear and splendid autumn morning when the startling news of Skoryna's message came to the world.

Pensively Korf looked out into the distance. There could now be no more delay. The solitary man up there was clinging with his last power to a straw: send help!

But who was to help him? Must he not despair of the possibility of rescue?

A mad impatience seized Korf. It was only because of money, base wretched money, that he stood helpless before his half-completed construction. And up there in space a tortured, agonized human being was calling for him—for him! He alone could help! The ship would have been finished long ago, if these eternal financial difficulties had not put everything off.

The burning of his laboratory came to his mind. It was strange: chance, a trifling spark which produced the explosion, this had set him back many months in his work—and now the despairing wretch out in the limitless distance must suffer for it.

If only he could send him a message! If he could only flash to the moon this one sentence: Hold out! Was there absolutely no possibility of giving the rocket at least an indication that the message had been received on earth?

Korf felt responsible for the unfortunate person. One reproach gnawed at his conscience. Had it been right to refuse the foreign money, several times offered him, out of vain national pride? Did his ship really have to be merely German work throughout? Are not all nations alike before eternal infinity?

But there was no time now for reflection. Action was necessary: the construction had to be hastened as much as possible and completed, before the prisoner should despair of rescue and lose his mind.

Korf looked at the clock.

If he hurried, he could still catch the Munich express. He had to see the representative of the central government, then by chance visiting the Bavarian government, to impress on him the necessity of getting more money as quickly as possible. He hurried to his home to change his clothes. On the desk was a telegram which he heedlessly put in his pocket. It might perhaps delay him, and time was now all important.

On the train Korf became calmer. The comforting influence of speedy travel did not fail to have its effect on him. He carefully considered what he had to say to the official. They would have to listen to him and provide him with funds. A refusal would now be equivalent to murder.

At noon Korf arrived in Munich. Since he could not count on finding the official in his office before two o'clock, there was nothing to do but wait.

He was just walking toward the centre of the city and considering whether he should not have lunch in the meanwhile, when someone behind him called out:

"Hello! Hello!"

Korf stopped. An excited little man came running along breathlessly, his overcoat flapping behind him, a pipe in his hand, and pipestems sticking out of his pockets.

"Truly, it is Uncle Sam himself, in the best of health!" cried Korf joyfully, hurrying to meet him.

"Young fellow, you don't seem to recognize your old uncle any more!" exclaimed the latter, shaking his brother-in-law's hand violently enough to dislocate his wrist. "Just the same, it's fine that you came to meet me."

"Came to meet you? I did not have a ghost of an idea that you were in Munich."

"Why, didn't you get my telegram?"

An idea came to Korf. He fished from his overcoat pocket the telegram, which he had entirely forgotten.

"I received it all right, uncle," he said in embarrassment, "but I haven't read it yet. I shall at once do so."

"That is not necessary now, Gus," laughed Sam. "We do not need to communicate in writing at present."

"But how in the world do you happen to be right here, Uncle Sam, and why didn't you write for weeks?"

"You will learn everything. We just arrived at the Oberwiesen Airport in a Junker plane. That is far better than travelling in the torture chambers of a train."

"We?—Aren't you alone?"

"I am bringing along a man who will provide you with half a million for your work. That made you open your eyes! Didn't I tell you that old Sam had many acquaintances and would look about a little for you?"

Korf looked seriously at his brother-in-law. "You cannot possibly know how important your information is for me today, uncle! How did you manage it?"

"Gus, I will confess that I am terribly hungry. Isn't it best to do our talking in the Franziskaner café?"

"And your companion?"

"The two gentlemen went to the Excelsior. Tomorrow you shall see them in Friedrichshafen. Come on, Gus, forward march! I shall be immensely pleased to have a glass of extra dark and some leberwurst. If you care at all for your uncle, ask no more questions but hurry!"

#### Korf Parts with the Past

WITH some difficulty they found seats in the great hall of the Franziskaner. Sam would not answer any questions. He was interested only in the menu and seemed to be in the best of humor.

"Tokay in a café by the Danube in Budapest—soda at Riegeler's in Bucharest—March beer at the Franziskaner in Munich—what more could the heart desire?" he cried, when the foaming glasses were placed on the table.

"You went so far for the money?"

"In case of need, I should have gone clear to the

Ganges!" said Sam, setting to work on his sausages.

When he had averted the worst danger of death by starvation, he finally consented to give a connected story. He gave the fullest account of his investigations into the affairs of the Transcosmos Company and of his interview with Vacarescu, but he kept silent regarding the criminal investigations of his trip.

Korf listened with growing amazement.

"And the Transcosmos Company now wants to finance me?"

"Certainly! Vacarescu intends to open for you an account of twenty-five thousand English pounds, as soon as he has convinced himself of the practicability of your project. For this purpose he wishes to examine your model tomorrow and he is bringing as an expert his technical director, this noted engineer Suchinow. Are you afraid of imprilling your secret by this?"

"No, not at all! But I should not like

to have any foreign company get claims on my invention."

Sam grinned contentedly.

"Claims? Who says anything about claims? Vacarescu is giving you a building loan with fixed interest, a sort of mortgage on your first ship. That finishes the rights of the Transcosmos Company. After your first flight you will form some company or other,

which will then take over and amortise your debts. This mortgage cannot be foreclosed for five years. Up to this time the Roumanian cannot put in a word. And by then your company must have got so far ahead that it can satisfy Vacarescu. Don't you think so?"

"But tell me, Uncle Sam, why does Vacarescu help a rival like me to get started? He must have some interest in the matter!"

"Certainly! He imposes two conditions, to which you can presumably agree. One condition is that you pledge yourself to devote your first trip exclusively to the saving of the rocket."

"In any case I shall do that, as quickly as possible! Do you know the latest news?"

"I know a lot of news, but whether the very latest is included. . . ."



The speedometer indicated six thousand meters a second. For the second time the ship divided. The pure hydrogen rocket flamed forth and spit its glowing vapors backward at an incredible speed.

"The rocket has sent light-signals to the earth, calling for help!" In a few words he told of Skoryna's message.

"Splendid!" answered Sam. "Now things are going right! Then Skoryna is still alive!"

"And Vacarescu's second condition?"

Sam became embarrassed and tried to evade the issue.

"It is only a trifle, though rather remarkable: you are simply to forget something, acting as though it had never had anything to do with your life, saying nothing more about it, and preserving absolute silence on the subject!"

"What is this 'it'?"

"Less an 'it' than a 'she'; well, I mean Nataalka."

In surprise Korf remained silent, while Sam uneasily moved back and forth on his chair and took another drink of beer.

"Uncle Sam, you know more than you have told me!" said Korf in a mildly reproachful tone.

Sam blew his nose, to gain time to think. "See here, Gus, this Nataalka is certainly worth no more of your thoughts than this: putting her in a box, closing the cover carefully, locking it, and then losing the key. At present she is appearing at the Orpheum in Budapest, dancing through life with her cavaliers—and August Korf is as indifferent to her as—as you are not indifferent to me, Gus."

"Are you certain about all this? You are torturing me, uncle; does it have to be so?"

Sam took out of his pocket the package containing Nataalka's letters.

"See here! She wrote a supply of these letters a long time ago and deposited them in Berlin, in order not to have to think of you any more and to lull you to sleep slowly. There you have them all at once. Just throw them in the stove."

He ordered another glass of beer and silently watched as Korf tore up Nataalka's letters, one after another, and burned them in the ash tray.

"So be it!" Korf suppressed his emotion. "Out there in empty space, at a tremendous distance, a human being is struggling for life in the most horrible position to which a living being has ever been exposed. I can bring aid, I alone! There must be no hesitation. I will try to kill my feeling for Nataalka, in order to save Skoryna."

"You are a good man, Gus!" said Sam, much pleased. Then, thinking he had one more thing to do, he added, "I also brought you something else. It is Nataalka's latest picture, as a reminder of your great folly."

He handed Korf the Budapest photograph, showing Mrs. Mertens sitting on the sofa. Korf quickly took the picture, examined it carefully, and then handed it back to Sam with a trace of disappointment.

"There certainly is a striking resemblance, but this woman is not Nataalka."

## CHAPTER XII

### The Mountain Approaches Mahomet

KORF returned alone to Friedrichshafen. Sam wished to conduct his foreign guests to Lake Constance and therefore spent the night in Munich.

Monotonously the express thundered through the night. Korf had settled down in a corner of an empty section and was balancing up the events of the day. He was in a position to be satisfied. Even at the official's the necessity of quick action had been seen, and speedy provision of money was in sight. Probably there would also be more money coming in from the public drive for funds. This startling drama in space and this appeal from the skies must certainly rouse the feelings of mankind.

Korf opened the window and let the cool night breeze blow on his brow. "Hold out, lonely one up there!" he murmured. "Hold out and do not despair! I am coming!"

Then he thought thankfully of good old Sam. The withered bony man had accomplished something which Korf would never have believed possible for him. Yet Sam's story left him in the dark on several points. Where did he get Nataalka's letters, and what was the meaning of the picture, which Sam had believed to represent Nataalka? After the pointing out of this error Sam had remained in impenetrable silence. There was nothing more to be got from him. Who was Nataalka, and what had she to do with Vacarescu, who joined so strange a condition with his loan? Would the veil which lay over Nataalka ever be lifted, now that Korf had promised to preserve absolute silence on the subject and let her sink into forgetfulness?

Certainly he would keep his word to say nothing more about Nataalka and to make no investigation about her; but he would never forget the brave heroine, all the more since Sam's suggestions had awakened his recollection and excited his interest by the mystery which surrounded her.

Involuntarily he thought of the story of the treasure digger who was forbidden to think of a rhinoceros while digging. In his whole life he had never been concerned with a rhinoceros, but now he could not get the subject out of his mind, and the treasure remained undiscovered.

With all his might Korf resisted the tendency to meditate thus. It was time for action, the world was waiting for his work. He could not squander his energy in futile scheming.

The following morning an automobile drew up before his laboratory, and three gentlemen got out. Sam introduced Korf to the foreigners. For a moment the two rivals, Korf and Suchinow, looked fixedly at each other; then Suchinow lowered his eyes. Even if the Russian had erred in his conduct, this penitential journey was atonement enough. It did not escape Sam that the Russian purposely had in one hand a brief case and in the other a small box, an unobtrusive way of avoiding shaking hands.

Since Vacarescu did not understand German and Suchinow remained silent, there was an uncomfortable silence in the great whitewashed room into which Korf led his guests.

The laboratory disappointed the visitors in its bareness. On the walls were maps and diagrams, and at the window stood an immense table covered with drawings. Except for the numerous electric wires coming together at a marble switchboard and a small table covered with a confusion of retorts, tubes, coils, and wires, there was nothing to indicate the development here of a technical marvel, a truly ingenious invention.

"I cannot show you much here," said Korf, breaking the stillness. "You know that lack of money has hindered construction. Still I think you can get a good survey of the project from the plans and calculations."

Then he explained, so far as seemed necessary, the gasification and combustion of the liquid fuel. He demonstrated the recoil effect by a small model motor.

Suchinow translated the separate sentences for Vacarescu and asked questions in the German heard in Poland and Russia, which seemed rather Jewish to a Swabian ear. These questions indicated quick comprehension and thorough technical knowledge. Sam meanwhile, taking no part and seeming rather superfluous here, stood in the corner and smoked. He had already done his part.

"Now that you appear to have succeeded in overcoming the technical difficulties involving the use of liquid fuel," said Suchinow, "hydrogen gas certainly seems to be the most favorable fuel for the space ship."

"You are quite right!" agreed Korf. "But not for the start. You must not forget that only a moderate initial acceleration is possible, in view of the lives of the crew. It would be wasteful to use hydrogen energy to produce the slight starting speed. For that a substance with a greater specific gravity, which increases the load, is even more efficient, because it hastens the penetration of the dense lower layers of air. It is only advisable to let the hydrogen rocket begin to function when its energy really comes to its highest efficiency, that is to say, in the high thin layers and at a greater speed."

"By using suitably mixed fuels, suited to the various speeds, the efficiency of the machine is immensely increased."

"Then how are you going to start the rocket?"

Korf looked sharply at Suchinow. "Until very recently I thought my dynamic cartridge the best solution of the starting problem."

The Russian bit his lips so hard that a drop of blood appeared. His voice was hoarser as he asked, summoning up all his self-control:

"And now?"

"Now I am not disposed to use solid explosives in any form. I have decided to use alcohol to run the lowest auxiliary rocket."

"Auxiliary rocket?"

"Yes. The space ship when ready to start will

consist of three separate rockets joined together. The lowest rocket, using pure alcohol, operates the whole system from the start to the speed of about two thousand meters a second. As soon as it is burned out, it is uncoupled and cast off. Then the second auxiliary rocket begins to act, increasing the speed still more by its mixture of alcohol and hydrogen; after its tanks are empty, it is likewise cast off. There finally remains the pure hydrogen rocket, in which of course are the passengers, the instruments, and the means for controlling the ship. Thus only a small part of the machine which starts, the egg-shaped point, in fact, will make the flight into infinity as the actual space ship. On return to the earth it will have not more than a sixtieth part of the original total weight. In this way for every kilogram of essential weight there is so great a quantity of fuel and consequently of energy units that the safe passage of the limit of the earth's attraction is beyond question."

#### The Space Suit

WHILE Suchinow was explaining this to the financier, Sam came over to Korf.

"There is one thing I do not yet understand, Gus. How in the world can a person live in a space ship, in which he has none of the prerequisites for existence, air, pressure, heat, and even weight?"

"Those are the smallest difficulties, Uncle Sam! I simply take along a bit of the earth—with everything that pertains to life, including, of course, tobacco. You should rather ask how the exact investigation of the moon is to be managed!"

"What!" Suchinow took a hand in the conversation. "You intend to land on the moon?"

"Not on the first trip; that concerns only Skoryna. I intend to on my second expedition. Naturally the crew must be able to leave the space ship."

"On the airless moon?"

"Not only on the moon but also during the trip though space, air!"

"Isn't that a mere fancy?" said the Russian skeptically. He regarded the scheme as madness.

Korf opened the doors of a chamber built in the wall, entirely finished in rubber and provided with an airtight door.

"Two things (aside from cold, which can be overcome) seem to make a stay in space impossible for human beings: the absence of pressure and the lack of air. I am going to pump the air from this room, which really amounts to nothing more than a laboratory flask on a large scale, so that the interior will be like airless and pressureless space."

With great excitement the visitors watched Korf take from a drawer a bundle, which he opened up.

"This is a suit made of rubberized leather, like a diving suit, and absolutely airtight. By means of a special air magazine so much air is constantly produced in the suit that there is a constant pressure of one atmosphere, regardless of the external pressure."

"Perhaps one of you would be so kind as to put on the suit. Unfortunately, I cannot be the subject

of the experiment, since I have to manage the exhausts."

Uncle Sam surveyed the costume and the helmet which screwed on, but at once drew back when Korf nodded encouragingly to him. He was glad to leave it to the Russian to be the subject of the test.

Suchinow silently slipped into the costume and allowed Korf to screw on the helmet with the oxygen containers. Then he placed himself in the centre of the chamber. In one of his leather-covered hands Korf placed a burning candle. Then he closed the door, through the glass window of which all the proceedings could be witnessed. They could clearly hear an electric bell in the chamber, which Korf switched on.

The pump began to work. The candle flickered and went out. The bell seemed to sound fainter and fainter, though the clapper kept on striking. Korf shut off the pump.

"Now, except for weight and heat, the same conditions prevail in this chamber as in space. Yet Mr. Suchinow, with whom we cannot communicate at present, certainly feels all right."

Sam looked through the window and laughed out loud. In fact, Suchinow presented a very comical appearance. The suit had swelled to its fullest extent and had taken on a shape much like that of the favorite rubber dolls of festival times.

The expansive round figure in the chamber was walking back and forth, swinging its arms up and down, jumping in the air, shadow-boxing a little, and removing all doubt about its being in full possession of its powers.

Korf opened a little valve. The air rushed into the chamber, the bell sounded again, and the fantastic figure resumed its normal appearance.

"I congratulate you!" said Suchinow, when he had removed the suit. "It is very probably possible to remain in airless space in this pneumatic suit. But how do you propose to have a person move in space, since he is subject to no force of attraction and accordingly has no weight?"

"Certainly the absence of any pressure will at first be confusing to the passengers. Still we can get used to that. And after all it makes no difference whether the crew floats weightlessly about inside the ship or hovers like angels outside. There is in any case no weight. There is also the point that leaving my ship is absolutely essential in order to save the rocket; besides that, I intend to spend part, maybe even most, of the trip on the wings of the ship."

"Your ship has wings?" said Suchinow, passing to another point. "Why wings, which are entirely useless in space in the absence of a supporting medium, and only represent needless weight?"

"To be sure, the wings have no significance for the actual flight through space; they neither help nor harm. But even at the start they are a welcome aid to carry the space ship like an airplane above the lowest dense layers of air. Their most

important function, however, is in landing. The ship on returning to earth enters the atmosphere at a cosmic speed and must be braked. If that is managed by simple recoil shots, landing would require the same tremendous amount of energy as starting. On the other hand, a space ship provided with wings can support itself in the air just like an airplane—first of all in the thin uppermost layers. It will enter almost parallel to the surface of the earth, keep sinking into denser layers, and gradually exhaust its speed by air resistance in as long a braking run as desired. Once its speed is reduced to two hundred meters a second, it can manoeuvre like an airplane and come down in a gentle glide to any desired point on earth, that is to say, the starting place."

#### Korf's Purpose

VACARESCU had until now remained silent and had limited himself to listening to Suchinow's brief translations. Suddenly he stepped up to Korf and questioned him in French, a language which Korf understood very well but could not speak sufficiently fluently:

"Sir, what is the final purpose of your invention?"

"The final purpose?" answered Korf with gleaming eyes. "As my final purpose I intend to render the inexhaustible heat energy of the sun serviceable for mankind. Far out in space, at the limit of the earth's gravity, power stations shall arise, immense solar reflectors, making possible the concentration of gigantic amounts of energy at any desired spot on earth. The vast stretches of frozen polar lands can then be made fertile territory; fertile landscapes could be made barren wastes. Mankind shall be made independent of the decreasing coal supply of the earth, and any preparation for war can be nipped in the bud. Wealth and happiness shall come to the earth and let a joyful human race develop in unity and freedom. That, sir, is the final purpose of my invention!"

Old Sam did not trust his ears, when he heard these words. Was there more in Korf than just the cool and calculating technician?

"Gus!" said he, pressing his brother-in-law's hand. "Every day you furnish new surprises!"

"May I now invite you to follow me to the site of construction?" said Korf, turning to Suchinow, who was talking eagerly with Vacarescu.

On the landing place by the lake there was great activity. From a distance they could hear the concrete mixers. Little tipcarts rolled up to the separate points of construction and poured their moist contents into the forms. Most of the supports of the runway were already prepared.

Suchinow seemed greatly surprised at the length of the arrangement. But Korf reminded him with a smile of the airplane wings.

"For the starting giant airship," said he, "it is necessary to provide a correspondingly long runway. My rocket does not rise vertically but goes

up obliquely like any airplane. One hundred meters run, which is ample for an airplane, is naturally insufficient for a space ship with the dimensions of a Zeppelin."

Above the lower part of the runway the iron framework of the mighty space ship hangar was already erected, similar to great Zeppelin sheds but much wider, in view of the projecting wings.

As yet nothing was to be seen of the space ship itself. The separate parts were being constructed in various divisions of the Victoria works and in great measure had not even been begun, because of the lack of capital.

Suchinow asked another series of questions, part of which Korf answered evasively or not at all, when they concerned things which he thought he should keep secret. Nevertheless Suchinow was convinced that Korf's space ship removed all doubt as to the practicability of the plans made.

"Regarding business matters," said Korf, as the two foreigners were taking their leave. "I request you to discuss things with my representative, whose address you will find on this card. Dr. Kramer has all necessary instructions and power to settle matters."

With a cool ceremonial bow Vacaescu and Suchinow entered the automobile and drove off without turning around.

"Gus," remarked Uncle Sam, when the car had disappeared, "you are splendid! I simply wonder that this green-dotted Russian did not burst with anger. He must have seen that he can simply pack up his little rocket, when you get started."

"Do you think that this Vacaescu will really give the money?" said Korf, slightly worried.

"Gus, just let old Sam look out for such details. Do you think I have been travelling around for weeks, to let the man escape in the last minute? You just stay quietly at your construction work. I am going right over to see Dr. Kramer, and I shall keep my eyes on Mr. Vacaescu."

## PART II

### CHAPTER XIII

#### Ready to Start

**M**ONTHS had passed. An unusually severe but dry winter had favored the work at Lake Constance. Even though Korf made the unwelcome discovery, while the work was going on, that he had considerably underestimated the cost, sufficient means were now coming in through subscriptions, which along with Vacaescu's loan eliminated all financial worries. The appeal from the skies had had its effect. The state also was now giving much assistance to the work by providing men who were out of employment, the state funds taking care of their pay.

Korf was tirelessly active. Being temporarily released from his position as chief engineer at the Victoria Airport, he could devote all his time and strength to the construction. It was due to his untiring zeal and his arrangements on a grand scale

that the space ship was already close to completion by the end of January. Korf would not grant himself any rest, as long as he knew that Skoryna was in danger.

For almost five months the rocket had been circling about the moon, unchanged in its orbit. The horrible fate of the pioneer of spatial navigation kept the world excited.

Was he still alive? Asking this question was equivalent to answering it in the negative. Yet Korf did not give up hope.

No more light-signals from the rocket had been seen, though every observatory in the world was carefully examining the vicinity of the moon, when ever the space ship entered the shadow of either the earth or the moon. Accordingly Skoryna's fate was extremely uncertain, and the world waited impatiently for Korf's rescue expedition.

Old Sam, who had for the time being suppressed his wanderlust and rented furnished rooms near the airport, where he hoped to revive again his former medical practice, could not entirely hide his negative view regarding the question of spatial navigation. Nevertheless, he helped out, so far as he could, in speeding up the work and the preparations. For him the work was no longer a debatable incident of technical progress; it was the life work of his brother-in-law. Besides that, the enterprise had a noble humane purpose to fulfill, to which philosophical debates regarding timeliness and necessity had to yield.

When Korf began to collect the crew of the ship and sent Sam an official invitation to make the trip as ship's doctor, the old cosmopolite had a hard problem to solve. It was certainly not cowardice which made him hesitate in his decision; it was rather a drawing back before the grandiose immensity of the enterprise, the hesitancy of a proud and modest character at the threshold of prominence.

Korf knew how to clear up his doubts.

"Uncle Sam," said he one evening, when they were sitting together before the stove in Finkle's abode, "do you remember that splendid summer evening on the lake, shortly after your return, when you greeted the sunlit Zugspitze and were so happy to see your old home again?"

"Certainly, the evening was too beautiful for me to forget it ever."

"Do you recall that you spoke of an insignificant human being who rashly wishes to leave mother earth and of a breath which can extinguish this person out there in space?"

Korf had such a worried a look that Sam could not help grinning.

"Another reason for me to remain quietly on earth," he replied, with a face which tried to be serious. "Isn't it enough for one of us to be lost?"

Korf looked up in surprise. For some time Sam enjoyed his brother-in-law's amazement and then added:

"I understand all right, Gus. If you are putting

on such pressure, then—oh, well, for Heaven's sake build a little ice chest in your great palace and don't venture to nail up any placards with the enchanting wording: "No smoking!"

"Then you are coming along, Uncle Sam?" cried Korf joyfully, seizing his hand.

"What else can I do?" grumbled Sam, pulling his hand away. Then he went over to Mother Barbara's for a glass of beer, to think over the new state of affairs.

The last week before the start passed rapidly. First of all, the crew had to be trained and tested as to their suitability. Conditions were to be anticipated on the coming trip subject to which no person on earth had ever lived, the effect of which upon an individual's physical system no one could foresee. Even if it might be assumed that the absence of gravity during the free flight in space would produce no very disadvantageous results, there was the danger of the excessively increased pressure during the ascent. Since medical experience was not sufficient to express a certain judgment regarding physical powers of resistance to this unwanted phenomenon, Korf—to be absolutely sure—constructed a testing apparatus like a merry-go-round, on which the candidates were revolved at high speed in a circular path. In this case centrifugal force exerted a pressure on the occupants of the merry-go-round, which could be increased at will and observed in its effect on those being tested.

Thus Korf had selected a useful little group of ten aeronautical workers, all persons whom he had learned to know and to value as skillful and dependable during his years of activity at the airport.

As second navigation officer he took a well tried Zeppelin operator named Berger, who previously, when the Z-R3 went to America, had for the first time conducted the taking of bearings by radio and had thereby won a name for himself. Berger gave a regular jump of joy when he was informed of his position on the space ship.

"Didn't I always say," he remarked radiantly to Korf, who on principle was taking only unmarried men, "marrying is a fine thing, if someone else is doing it!"

"Here's to true comradeship, Mr. Berger!" replied Korf. He knew that he could rely on this man.

The ascent was fixed for the third of February.

Days beforehand the starting place was continually surrounded by movie photographers, reporters, and curious persons, who occasionally sneaked through the fence and tried to get a closer view of the space ship. But the guards were on the watch and escorted every intruder none too gently from the forbidden zone.

Korf could no longer keep away from interviewers of all nations, who managed to find him everywhere and at the most incredible hours, until Sam offered to receive these people and to satisfy them on Korf's behalf. As a matter of fact, many news-

papers published the yarns which Sam dictated to the journalists who wanted a sensation.

#### Final Inspection

AT last the expected day arrived. Very early in the morning special trains from all directions brought huge swarms of people to the quiet little city. In dense unbroken lines the crowd poured out to the starting place, which was shut off in a wide enclosure by a strong body of soldiers and mounted police. Packed in further than the eye could see, the crowd pushed back and forth in a constant wavelike motion. The new comers pushed forward and did not let the lucky ones who were established on camp stools right behind the fence enjoy their favorable position. There was a constant crowding and pushing, so that often there resulted jams dangerous to life and limb, so the ambulance detachment had its hands full.

Yet the possessors of the best places could see nothing but the immense bare shed which concealed the space ship, together with the rails of the runway, coming from the end of the shed and spanning the depressions like a railway trestle in its course up the eastern slope.

The entire crew was already on board and was taking in the last supplies under Berger's command. Slowly the trucks crept through the screaming crowd and unloaded, before the little side door of the shed, chests, boxes, and bales, all of which disappeared out by one into the dark opening. After the baggage came a cage containing a pretty little parrot, Berger's mascot, which was uttering loud cries of protest. Last of all appeared a crafty movie photographer, who had hidden among the baggage, to take close-ups during the unloading, and was now protecting his booty amid struggles and yells.

Korf and Sam had kept the last few days on earth free and had gone out on the lake in a little boat. Silently they looked over to the snow-covered mountains and woods of their home and said a wordless good-bye. They were taking leave not only of their native mountains and woods but also of mother earth, of solid ground, of air and heat, of the realm of mankind.

What would the future hours bring? Victory or destruction? Would they ever again breathe the air of earth and feel the ground under their feet and sense the charm of fragrant spring? Or were they destined to die in darkness and cold and dreadful loneliness?

Were they to be like Skoryna?

The thought of this wretched being awakened Korf from his reverie. He shook off the soft emotions which were threatening to overcome him in this memorable hour of departure.

The early twilight of winter was commencing, when Korf and Sam made their appearance, accompanied by Director Heyse, a prominent representative of the government, and a small group of carefully selected newspaper correspondents. The

crowd became excited. "There is Korf!" went as quickly as lightning from one to another, and there was a thunder of applause as the inventor's car passed into the enclosure.

Berger stepped up to Korf. "Ready for the start!" he said in military style.

"Thank you!" said Korf, briefly but in a friendly tone. Then he led his guests into the shed, which was illuminated as bright as day by electric reflectors.

There lay the mighty space ship. It consisted of a gigantic steel hull, shaped somewhat like a cigar, ending in a blunt point with windows all around. The rear end of this giant cigar (half of it painted black, longitudinally, and half brightly polished) showed the opening of the exhaust pipe of the auxiliary rocket between the stabilizing wings. The men looked as tiny as ants beside the smooth hull of the fantastic flying machine.

At a sign from Korf the doors opened, dazzling lights flashed out into the darkness and driven by unseen forces the ship slowly began to move and glided majestically into the open on rollers moving on the rails of the runway.

A loud hurrah from the vast throng greeted the colossus as it glided out for its first emergence from the protecting shed. Then it stood still again, but within there was great activity. The wings moved and spread out to their full extent. The shining grub was unfolding its wings and becoming an immense dragonfly with three pairs of wings, one behind the other. On the point of the forward section the German naval flag was blowing in the breeze.

The onlookers became silent. This then was the fabulous machine about which all the newspapers had talked for months. This was the sky ship of steel and lead which was to carry brave men beyond their native earth, which was destined to realize the thousand year-old dream of humanity of conquering the sidereal world. German inspiration and German ability—would they conquer the might of the earth and the sun?

Korf led his guests into the interior of the forward section of the ship by way of a gangplank which was quickly set up. The opening in the steel wall led to a small chamber the size of an elevator.

"This chamber," the engineer explained, "is the one and only entrance to the parts of the ship which are at all accessible. Its two pneumatic doors make possible during the flight leaving the ship in this manner: first coming into the chamber through the inner door, then closing this door and opening the outside one. Thus, during the entering and leaving the air pressure in the interior is not affected. Naturally it is not possible to leave the ship without a 'space' suit. The absence of pressure in space would at once kill a man."

Through this chamber the guests reached a circular room illuminated with electric light, a sort of vestibule or hallway.

"This is the centre of the forward part of the ship," continued Korf, in the course of his explana-

tions, "around which are located the cabins, lavatory, dining room, smoking room, and electric kitchen. Below are the tanks of the hydrogen rocket."

"Below?" inquired one of the reporters, doubting whether he had heard correctly.

"That is so," said Korf with a smile. "I must first explain to you what is meant here by the terms up and down. By 'down' we naturally mean the direction in which pressure acts; during the ascent, as long as the rocket is in action, that is the direction from the bow to the exhaust. In our language on shipboard, therefore, the bow is always 'up', and the exhaust pipe, the rear end of the ship, is always 'down'. Of course this seems strange to you, now that we are in a horizontal position. But if you want to hold fast to the idea of 'up' and 'down', the longitudinal axis of the ship is the only guide to a vertical direction. In the present gravitational conditions the position of the tanks could be better described as 'behind the cabins'. Moreover, these tanks, together with the vaporization chambers and the exhaust pipes, are not accessible from within and are managed from the control point by means of electric control."

Korf turned to a circular passage which opened into the central room.

"This passage leads to the extreme tip of the ship, that is to say, 'up', in our vocabulary."

Cautiously the men passed through the opening. "But if the passageway is pointed upward," put in one of them, "I do not understand how. . . ."

"How anybody is to go up and down, you mean? You will find no steps anywhere in the entire ship, only easily movable rope ladders, which can be put up in case of need. You must not forget that the greatest part of the trip takes place in partial or complete absence of weight. Steps would then be only hindrances. Solid hand-holds on all the walls and floors are the best aids to progress from one point to another. During the ascent, the only time when there is a real and powerful pressure downward, nobody has anything to do in the passages."

#### Last Moments

**I**N the meantime Korf and the visitors had reached the tip of the ship, an odd looking room located at this point, resembling in form a truncated cone, the round walls being equipped by strong glass windows all around.

"Here is where the ship is controlled. The multiplicity of apparatus which you see fastened to the walls here with strong springs, I cannot explain in much detail in the short time available. In the main switchboard the wires of all the measuring devices come together, the results of which are registered by electric currents. A gyroscopic system, in place of the compass which is of no use here, shows the momentary position of the ship and its changes in direction. Three pressure springs, corresponding to the three coordinates of space, reproduce the components of acceleration which are likewise car-



ried by electric currents to measuring instruments and combined by automatic planimeters. Other apparatus automatically calculates from the acceleration the speed attained and consequently the distance travelled at any time. A series of scales, connected with the manometers, hydrometers, and the exterior aneroid barometers (all of which are built into the ship at various points), give a complete and easily observable picture of the entire pressure condition both inside and outside the ship. The equipment for navigation is supplemented by optical and astronomical instruments of special kinds. The various levers and switches control the wings, the stabilizers, the pumps, and various other apparatus. With a slight touch the entire ship may be controlled.

"The most important device is this strong lever, which controls the access of fuel to the exhausts. It is, so to speak, the gas lever. Above it is the scale, the pointer of which indicates the absolute acceleration at any moment. The brilliant red line upon it is the marker of the border line between life and death. As long as the increase in speed per second is below forty meters, there is no direct danger to the lives of the crew. But if the pointer rises much above this limit, which is sharply indicated by the red line, we shall in all probability be crushed by the frightful pressure."

With a slight shudder the guests examined the scales and levers and carefully refrained from touching anything. Great drawing boards with conic section curves, serving for sketching in the flight curves, stood on rotary stands, every bit of solid wall being utilized.

"In the most extreme, that is to say highest, compartment of the tip," said Korf, "a parachute of one hundred and twenty square meters surface is placed, folded together closely. In the most extreme peril, if the engines do not work on landing on earth, it can hold the crew and preserve it from the crash. But I hope that it will never have occasion to be used."

Meanwhile it had become six o'clock.

"Unfortunately I must now ask you to leave the ship. We have only twenty minutes more."

They heeded this request only very unwillingly. There were still so many unanswered questions about the air supply, temperature, steering, the course of flight, and so on. Nevertheless Korf would not give any more explanations and repeated his insistent request.

"Gentlemen," he said, watch in hand, "every second of delay in starting will alter the course of the ship and put off for days the rescue of the rocket. I beg of you to consider this!"

When Korf again appeared on the gangplank, there was a new outburst of enthusiasm. Vainly he tried to quiet the crowd; it was absolutely impossible. He gave up the idea of a speech and took leave of the guests of honor with hearty handshakes.

"Gentlemen," he said simply, "please transmit

to mankind my thanks for the active support of my enterprise. I hope that my ship will justify the confidence reposed in me."

Then a member of the crew passed around a tray of full champagne glasses and quickly disappeared again into the door. Korf raised his glass, and his words rang out loudly and clearly over the wide space:

"As once Geryon, the three-headed winged monster, conducted Dante across the abyss of Hell, thus will Geryon, the three-winged space ship, carry us safely over the abysses of space.

"Accordingly let Geryon be the name of my ship!—Till we meet again!"

The glasses crashed on the ground, Korf cast off the gangplank, the door closed, the flag on the bow of the ship was taken in, and the reflectors sending lights from the shed were extinguished.

A breathless stillness lay upon the multitude. All eyes were fixed on the monster which was hardly visible in the dusk. Suddenly it glowed in a bright white light; the illumination tubes on the surface of the hull had been switched on. The brightness of day shone over the great enclosure and dazzled the eyes of the onlookers.

After a few seconds there sounded a shot, the signal arranged for the start.

The gigantic flying machine trembled, and a shrill screaming sounded over the fields, so that the people ducked their heads in terror. The upper two auxiliary exhausts had been started, spitting out behind them conical streams of fire. Slowly the space ship moved onto the rails of the runway—slowly for just a moment, for then it was off in a mad dash.

#### Into The Infinite

QUICKER and ever quicker the ship rushed ahead. After a second it was taking the incline. It raced up the slope with a speed many times that of an express train. In ten seconds it was past the kilometer mark—and now the brilliant gigantic butterfly was rising, freed from its rollers, freely floating into the night.

It was an overwhelming sight! A sea of yellowish light flooded the densely packed multitude. An outburst of thunderous applause followed the space ship.

As though lifted by spirit hands, the fiery figure sped obliquely upward in its mad course.

Then a thundering and rattling rent the air, so that the people tried to flee in panic terror. Horrified wide open eyes stared at the uncanny spectacle in the air. The rocket was operating at maximum power. The immense main exhaust had flamed out, and a gigantic trail of fire stood out like a comet's tail behind the speeding ship.

A glistering spark fell, already far beyond the chain of hills which framed the eastern shore. It was a little parachute carrying a dispatch box, the last direct greeting of the vanishing Geryon.

Nobody heeded it. All eyes were fixed on the

fery comet which, though the work of human hands, was making its luminous path across the evening sky.

The starting place sank into darkness. In the far distance the space ship was floating away, already too remote to illuminate the earth any longer. It cast a ghostly reflection in the waves of the lake.

As yet two minutes had not passed. The Geryon now seemed to the beholders nothing but a glowing dot. Then the trail of fire blazed out anew.

Councillor Heyse looked at his watch.

"Ninety-eight seconds!" he said to his neighbor. "Korf has just cast off the burned out auxiliary rocket and started the second alcohol rocket."

"About how far is the ship now?"

"There might be ninety kilometers between it and us at present."

"Incredible!" murmured the other. "From Lake Constance to Munich in two minutes!"

"I estimate the Geryon now twenty thousand meters above the central Alps. The highest peak of the Himalayas cannot rival that height."

After three more minutes the space ship was visible only to very good eyes as a faint dot on the southeastern sky. It might perhaps be seven hundred kilometers from the starting place.

"Now the ship is racing through the last part of the terrestrial atmosphere. The wings have done their work, for the time being."

The reporters crowded around the director of the airport and carefully noted what he said.

Good field glasses still permitted observation of the ship for some time. Then the dot in the heavens vanished. Only the few lucky possessors of a very powerful telescope could follow the Geryon any further in its path, which turned more and more to the south, until at about one o'clock it went behind the wooded heights of Rohrschach, looking at the time like a very faint star in the southwest.

"It is incomprehensible!" said Director Heyse, as he was going home. "Just a few hours ago I was standing in this space ship, which now, as a tiny fragment of the earth out in space, is floating between our planet and the moon!"

On the next morning the newspapers had long accounts of the start and the course of the space ship.

"Even if the Geryon," it was said there, "seems to move around the earth in a constantly widening spiral, which is an illusion caused by the rotation of the earth, all the observations indicate that its path is exactly in accordance with the predetermined S-shaped curve of ascent and is directed toward the constellation Aquarius, into which the moon will also enter in three days."

During the first half hour of the ascent some radio messages had been received from the Geryon, stating that so far the trip had gone smoothly and without any trouble and that the crew was all right. But these messages had soon ceased, since

the transmitter of the space ship could not reach more than six thousand kilometers at most.

On the following evening, at exactly the same time as the start, the Geryon reappeared in the eastern sky. But now the little telescopes and other aids to vision were useless. The public had to depend on announcements from astronomical observatories, whose great reflectors easily made out the space ship, now at a distance of almost fifteen diameters of the earth.

Again it rose higher in the heavens, crossed the meridian, and inclined toward the southwest. But before it reached the horizon, the tiny dot suddenly vanished and was seen no more.

Panic terror seized the world, when all the observatories sent announcements agreeing that the Geryon was no longer to be found in the sky. There was still hope because of the Suchinow rocket, which had so long remained undiscovered while within the shadow of the earth. People tried to calm themselves by assuming that Korf had doubtless shut off the external lights, in order to save energy.

But on succeeding nights, also, the Geryon was no longer visible in the heavens. Even the greatest observatories could no longer see anything.

What had happened?

Horror seized mankind. Had infinity swallowed up a second sacrifice as well? To be sure, every night they hoped that the extinguished spark would shine forth again—but in vain. Korf's space ship had disappeared.

Korf and his faithful men and Skoryna also were regarded as lost—lost forever. A great depression prevailed on earth.

## CHAPTER XIV

### First Moments

WHEN Korf, after the christening of the Geryon, had cast off the gangplank, he closed both the outer and inner doors very carefully and then hurried to the control room, where Berger was standing at the central switch-board looking at the chronometer.

"Are you all ready for the start?" asked Korf, casting an eye at the instruments and switches.

"Two men are at the generator, one is watching the gasifier, and two are here ready with the flight curves. The other five are at rest, but I am afraid no one is closing his eyes."

"I imagine not. As soon as we are having a free run, you will also be off duty, Berger." Korf looked around. "Where is Dr. Finkle?"

"He is getting settled in his cabin. Shall I ask him to come to the carousel?"

Korf nodded and got into his hammock, which was so placed that he could manage all the important switches while lying down. The carpets which had hitherto covered the curved floor had been removed. During the ascent this "floor" would of course become a wall, as soon as the pressure of

acceleration overcame that of the earth's attraction. The circular "wall," now behind, would then form the bottom of the room, which was traversed in the middle by a strong round wall, for the switching apparatus. This room resembled a "carrousel" or merry-go-round, closed in on all sides and now lying on one edge. Consequently the name "carrousel" had already become part of the vocabulary of the ship.

Sam appeared in the carrousel.

"It is really a very comfortable coop which you assigned me, Gus! I feel at home in it already. It is a bit narrow, of course, and I shall have to get used to the hammock way up in the air, but. . ."

"Switch on the outside lights!" The order rang through the speaking tube without the slightest trembling of the voice to betray any excitement at the greatness of the moment.

One last glance of examination of the travellers in the carrousel, all lying in their hammocks, and then Koef's eye did not leave the chronometer.

Thirty-two minutes past six. The second hand jumped further—two—five seconds.

Sam squinted sideways through the windows. His glance travelled over the starting place and the crowd of people. He saw a wave of excitement run through the crowd; he saw the emotion of the brightly-lighted faces. No sound, however, entered

A joyous existence commenced for the cook in the electric kitchen. He could now drop cups and plates as much as he pleased; they slowly floated down to the floor and were not broken.



"You will enjoy making the ascent here, I am sure!" interrupted Koef. "Please get quickly into the hammock! In two minutes the exhausts will begin to operate, and then woe to anyone who is standing up."

In fright Sam obeyed and climbed into the swaying net.

"All right?" Koef called through the speaking tube to the lower rooms.

"All right!" was the calm reply, as though it were merely the question of an ordinary Zeppelin flight.

the hermetically sealed ship from without. Only the measured throbbing of the motor which ran the lights and the high pitched song of the generators came from the engine room to his ears.

The hand progressed—twenty—thirty seconds.

Koef's fingers moved toward the gas lever, touched it, and rested calmly on the handle.

As though hypnotized, Sam stared at the sinewy hand which in the next moment was to snap its fingers at the supreme power of the earth. He actually felt the firm pressure of the fingers on the lever. At lightning speed the events of the last

few months passed before his mind's eye—the cares and worries of his brother-in-law, the hunt for Suchinow, Vacarescu, Nataika. . . .

Forty seconds—forty-five seconds—

Then the leader's hand moved. A push of the lever, and something like distant thunder shook the ship. The chronometer sprang back to zero. The hammocks vibrated.

The flight into infinity had commenced.

Outside the starting place was passing by; for an instant Sam saw hats and handkerchiefs waving in a tumult of enthusiasm. Then in the light of the ship, shining tree tops raced by. Further off were the silhouettes of the houses of Friedrichshafen, and behind them the surface of Lake Constance gleaming.

Korf moved the ascending control, the wings became oblique; the ship left the ground and rose into the air.

The lower windows were free. A brilliantly lighted strip lay below the ship. The ground seemed to rush back, sinking lower; it shone more weakly and disappeared. Outside the windows it was black night.

Now Korf gave full gas to the main exhaust. The thunder of the expulsion increased, becoming a roaring and crackling, like Hell broken loose. The acceleration indicator crept up the scale and wavered at the point twenty.

Sam was groaning in his hammock, with a tremendous weight pressing on him and squeezing his throat.

Pressure!

Creaking, the springs of the hammocks stretched. The cords tightened around the bodies, which were pulling downward with increased weight. Exhausted, Sam lay in the net, his glance directed straight upward. It was strange—the windows through which he had just been looking at the starry sky were sinking down sideways, while the circular forward wall was approaching and cutting off the view.

With trouble Sam turned his head. In truth, the arched wall of windows now surrounded him on all sides, with the flat circular "floor" above and below. The carrousel had assumed its proper position.

Thirty more seconds passed.

"Gus!" panted Sam.

"Yes, Uncle Sam?"

"Do you see that dim constellation out there sideways, at the same height as ourselves? There is a yellowish glow all around it. I never saw such an uncanny looking constellation."

Korf cast a rapid glance through the window. "Constellation?" He read the altimeter. "Presumably this constellation is Munich!"

In amazement Sam wanted to get up, but the tremendous weight threw him back.

"Munich?" he groaned. "Have you lost your senses? Since when did cities stick up on the sky?"

Korf did not answer. He was fixedly regarding

the acceleration scale, the indicator of which was slowly receding.

"The auxiliary rocket is burned out, Berger. Uncouple it!"

Berger's hand had already been on the handle. A slight pressure, and the mighty ship had divided. In an oblique course the uncoupled rocket rushed back to earth.

Quickly Korf's hands were busy at the gas levers.

"Look out, here comes full gas on the middle rocket!"

The indicator rose again, crossed twenty, hastened by twenty-five to thirty—thirty-one—and wavered at thirty-two, where it stopped. The brilliant red line was at forty.

### Three Minutes

THE pressure became intolerable. The hammocks sank deeply; the pressure on the men's chests was growing to be frightful. Sam could scarcely breathe now. He tried to raise his hand, but he succeeded only with a great effort, and his arm sank back exhausted, striking his body heavily. It seemed as though mercury were flowing in his veins instead of blood, as though every limb had become four times as heavy, as though four strong men were lying on him and holding him fast. The cords of the hammock were cutting through the pads laid on them, and his back hurt.

Sam asked no more questions. He was struggling for air. His lungs could scarcely raise the weight of his chest. For a time he struggled against the oppressive weight of his limbs, tried to say something, to cry out, then he sank back irresolutely, overpowered by the uncanny force. He could no longer even desire anything or think of anything. His mind was enveloped in twilight.

Korf was also suffering a great deal from the pressure. Reaching to execute the few simple manipulations of the apparatus became a test of strength. Only with the most extreme effort did his muscles succeed in extending his arm, to bring his hand to the lever.

The speedometer indicated six thousand meters a second. Again the acceleration indicator moved back.

"Detach the alcohol rocket!" mumbled Korf.

For the second time the ship divided. The pure hydrogen rocket flamed forth and spit its glowing vapors backward at an incredible speed.

The indicator came dangerously close to the red line. The machine was developing its highest power.

Only five minutes had actually passed since the start—an eternity to the crew. The raging noise of the exhaust was silent. The Geryon was already racing through heights, the unusually thin air of which could no longer convey sound.

There were still three minutes to hold out; then the speed would be attained which would carry the ship outside the limits of the earth's force. The speedometer rose evenly—seven thousand—eight thousand meters a second.

A horrible thought passed through Korf's mind. What if he did not manage to summon up strength enough to depress the gas lever!

Then with the high acceleration the speed would keep increasing more and more, until at length even the mighty supplies of the hydrogen rocket would be exhausted. Then, without any fuel at all, there would be no return possible. The ship would be precipitated beyond the orbit of the earth, rushing through the planetary realms in a mad course—on a hyperbolic path, running into infinity. In less than half an hour a speed would be reached which would carry the ship for ever beyond the solar system.

It was the seventh minute. The speeding ship traversed nine thousand meters every second.

Slowly and painfully Korf raised his arm, supporting it wearily in one of the slings hanging down from the ceiling. There was only a hand's breadth between his fingers and the gas lever. Painfully Korf fought for every centimeter. His strength threatened to leave him. For a moment he paused exhausted.

The instrument pitilessly announced a speed of nine thousand eight hundred meters.

Great Heavens, only two seconds remained! A push forward, his hand grasped the handle, and the lever flew back.

Cold sweat stood on Korf's brow. The fearful exertion had used up the last remnant of his strength.

The acceleration indicator sank, crossed the twenty line, went below ten, and settled at the line marking three meters a second increase in speed.

The pressure sank as rapidly as it had come.

The chronometer showed eight minutes.

## CHAPTER XV Beyond the Earth

FOR a while nothing stirred in the "carrousel". The silence was broken only by the heavy breathing of the five men.

Sam opened his eyes and looked about him. The lights were burning, and the windows were black yawning gulfs like the open jaws of beasts of prey.

He tried to sit up. He could do so: the mercury in his veins was gone. Comfortably he stretched and turned. It was a pleasure to be able to move again, to have once more attained mastery over his muscles. He drew a breath of relief, as after waking from a bad dream.

"Gus!" he cried. "Where are we now?"

There was no reply.

He climbed out of the hammock and walked over to his brother-in-law, stepping cautiously and testing the reliability of his legs. But what was this? He could hardly keep his balance. At any quick motion he threatened to fall over forward. He felt that he was remarkably light. Or was it the natural reaction from the dreadful pressure that still hurt all his muscles?

Korf lay bathed in sweat. Anxiously Sam rubbed his temples and held a bottle of camphor below his nose. Slowly Korf opened his eyes and gazed around uncomprehendingly. It was only a second before complete consciousness returned to him.

He first glanced at the chronometer. It showed twelve minutes. Quickly he jumped up. Berger and the two members of the crew had also recovered themselves.

"The hammocks can now be rolled up!" he called to Berger and then began to study the curves of the recording instruments.

"What a trip!" remarked Sam. "I shall never forget those eight minutes in all my life. All my bones hurt." He felt himself all over carefully. "Nothing seems to be broken."

"Yes, in the long run no human being could endure this pressure. Just take a look below, Berger, to see whether everything is all right."

"Gus!" began Sam, when Berger had disappeared. "Where are we now, really?"

Korf inspected the instruments. "Six thousand kilometers headway and almost four thousand in altitude."

"Four thousand in altitude?" repeated Sam. "And Mt. Everest has nine thousand. Well!"

"Yes, but that is in meters! Our unit is the kilometer!"

"Good Lord!" cried the physician. "Then we are—why, we are four hundred times as high as the loftiest point on earth!"

"Certainly!" Korf smiled. "The barometers outside have long been at zero. The atmosphere of the earth is already far behind, and we are now floating in space."

Berger reported through the speaking tube. "All right below! The dispatch box was released after fifteen seconds. The last radiogram has just been sent!"

"Very good, Berger, you may now go off duty."

Sam stood at the window and stared out into the black night. "Then we can't see anything more of the earth?"

Korf stepped to his side and adjusted the telescope.

"If you pay good attention, now and then you will be able to make out a gleam of light—perhaps the reflector of some lighthouse or else light signals from a steamer floating down there on the Pacific."

"The Pacific?"

"If it were bright, we could now see the earth from the Philippines to the east coast of France. Apparently we are now approximately over the Persian Gulf."

"Please point the telescope at Bombay for me. I should like to take another look at the place where I lived so long."

Korf laughed loudly. "You are asking a good deal, Uncle Sam." He adjusted the telescope again. "The Indian Ocean must be somewhere in this direction. Perhaps you will succeed in making out the yellow light of the illuminated city. Here's luck to you! But do not imagine that you can influence the night life of India from here."

The telescope was almost horizontal, with a slight inclination downward.

"Bombay, Gus! I want to see Bombay, not Mars!"

"Well then, look through it!"

Sam stepped back in amazement. "Are you trying to make a fool out of me? The earth is down there!" He made a couple of violent gestures with his hand toward the floor.

Korf winked at him, much pleased. "Certainly, Lake Constance is there."

"Well then!"

"And where do you suppose the centre of the earth is to be found?"

"The centre of the earth? I have never been there, but I suppose it is still lower down than Lake Constance."

"There, then?" Korf imitated Finkle's gestures.

"Naturally! Where else?"

"Over there, Uncle Sam!" He pointed obliquely but of the window. "There is the centre of the earth, and in front of it is the Persian Gulf, over which we are at present."

Sam's mouth remained wide open. "The earth up there in the sky?"

"Do not forget," Korf explained, "that we rose at a very acute angle, almost parallel to the surface of the earth. Accordingly we must look for the earth off to one side. The pressure which makes us feel the long axis of the ship to be vertical does not come from the earth but from the force of our rocket exhaust pipes."

Finkle's head went around like a mill wheel.

"If we had risen on the sunny side, that is to say, in the daytime, we could now see the surface of the earth beside us. The northwest edge of the globe would be exactly at our feet, the southeast edge on the contrary would appear almost level, and the entire visible surface would include an angle of almost ninety degrees. Unfortunately I cannot provide you with this doubtless grandiose view."

"Then why didn't we ascend by day?"

"Out of regard for terrestrial observations! In that case we should have been somewhere between the earth and the sun during the entire trip and could not have been seen from the earth."

#### Korf Stands By

**K**ORF busied himself with the flight curves and left Sam to his thoughts, which were extremely confused. He stared out into space and tried to represent to himself that over there in the distance was solid ground, with men standing and walking there and never once having the idea of puzzling out whether their legs actually did point to the centre of the earth.

After a pause he remarked, "Surely millions of eyes and hundreds of thousands of telescopes are now pointed at us, staring after the speeding point of light. And when I think of the millions of chilly feet and the epidemic of headcolds which will rage tomorrow down there or over there, I think it is a matter of common politeness to answer their attention a bit. You are acting just as though the world had already ceased to concern you."

"Dear Uncle," replied Korf with a smile, "the indications of my instruments are incomparably more interesting and important to me than the black night out there. It will doubtless suffice if you take over this duty of politeness—but I hope not in respect to the cold feet."

"I should say not. On the contrary, I find it actually uncomfortable hot here," groaned Sam. "Can't you have the heat shut off a little?"

"Not this heat, unfortunately. It comes from outside."

"From outside? I thought it was cold in space."

"Certainly! But this heat came from the friction of the air on the outer wall of our ship as it shot through. For your comfort I can assure you that

this incubator temperature will not last long. Besides, it has already decreased considerably."

Korf again called Berger. "What is the temperature down there?"

"Thirty-three degrees Centigrade."

"Well, the thermometer up here indicates thirty-eight. Have some liquid oxygen sprayed around and have the excess-pressure valves opened for a short time."

The heat was actually intolerable, and the evaporating oxygen brought only slight relief.

Sam yawned to his heart's content. "I am surprisingly tired!" he remarked, wiping his forehead. "I do not know why, but I feel as though I had been out all night on a spree. But we have been less than half an hour on the way."

"It will be all right for you to go to sleep, Uncle Sam," said Korf, who knew that this fatigue was not merely due to the heat. "When you wake up again, there will be no more of these unpleasant phenomena which the earth has presented us on parting. For the present there is nothing to be seen but black night. Sleep well, uncle, and if you need anything, ring for the orderly."

Yawning wearily, Sam climbed down the swaying rope ladder, crossed the central room, and entered his cabin. The inviting white hammock attracted him very much, and before he thought of undressing, he sank down and fell at once into a dreamless sleep.

Korf remained at his post, although he had to struggle against the uncanny weariness and limpness of his limbs and suffered from the breathless heat. But as long as the Geryon was still floating within the earth's region of power, he dared not entrust the observation of the instruments to anyone else. Data had to be assembled for the future landing manoeuvres, and the least negligence might lead to serious consequences.

From time to time he depressed the acceleration lever. The pressure decreased proportionately and all objects lost weight. He could have shut off the exhaust completely, since the Geryon had long since attained the speed which would safely take it from the reach of the earth. But Korf was insistent on reaching his goal as quickly as possible. He did not give up the hope of finding Skoryna still alive. Perhaps his spark of life was actually at the point of being extinguished, and one single moment sooner or later might decide matters.

The night continued, and the clocks showed the sixth hour since the start. Seventy thousand kilometers, almost double the circumference of the earth, separated the crew of the space ship from mankind. Unchanged deep night surrounded the ship, and nothing more was to be seen of the earth. Only a wide starless space indicated the spot where their native planet was floating.

"Now the presses of the morning papers are working," thought Korf. "People will struggle for the sheets still damp from the press and will eagerly wait for messages from California, in the field of vision of which we now are."

More and more the ship radiated its heat into space. Again they felt free and easy and took a breath of relief, as though a tremendous pressure had been removed.

Korf smiled as he thought of the surprises in

store for all of them in this matter. Since no more danger threatened the *Gryon*, which had escaped from the earth, he no longer hesitated to be relieved by Berger and to take a few hours' rest.

## CHAPTER XVI

### A New Day

WHEN Sam awoke, his first glance was at his watch. "Nine o'clock?" he reflected. "What does that mean? Nine in the morning or nine in the evening?"

He quickly performed his toilet and rang for the orderly.

"Just tell me, what time is it now?"

"Half past fourteen."

"What!"

"Half past fourteen, doctor. Here time is reckoned from the ascent and the hours run from zero to twenty-four."

"Where is Mr. Korf?"

"He is sitting with Mr. Berger in the carrousel and has several times inquired for you, doctor."

Sam hurriedly drank his coffee and then hastened to the control room. Everywhere electric bulbs were burning. There was no sign of daylight.

"Well, that's what I call sleeping, Uncle Sam!" was Korf's merry greeting. "You did not get bed sores, did you?"

"Far from it! I feel wonderfully fresh and gay, and it seems as though I had become ten years younger by this sleep. Have I really slept so long? The boy told me it was fourteen o'clock. My watch says nine, and the night is not over yet. I am now quite lost in the calendar."

"Yes, Uncle Sam, by Friedrichshafen local time it is now certainly nine o'clock. But you had better set your watch by the ship's time. It is foolish to reckon here by the local time of some spot on earth."

"When is it really day in this gloomy region?" asked Sam, who was walking up and down with long springy strides. Occasionally he had to catch his balance in order not to fall.

"As soon as the sun is no longer hidden from us by the earth. That may be in about four hours. In the meantime we must be satisfied with the light of the stars and the moon."

Korf turned out the electric light. Still it was not absolutely dark in the room. There came in at the side a faint silvery light, which cast great shadows and would have sufficed for reading a newspaper, in case of need.

"Yonder is the moon, though only the half disk. If it were full, we could not complain about darkness. The stars also give a perceptible illumination."

In fact the stars were radiating a quiet even light, without twinkling, much brighter than on earth, because there the dense atmosphere absorbs a great deal of the light.

"It is not so simple to find your way here in the sky," continued Korf. "The constellations familiar to us are almost effaced by the great number of small faint stars which on earth cannot be seen with the naked eye on account of the air. In this swarm back there," said he, pointing diagonally upward with his hand, "you will recognize with

some difficulty the constellation of the Little Bear (Little Dipper), in the tail of which is the pole star, around which the entire sky seems to revolve, as viewed from the earth. For us it has lost its central position and remains only a welcome aid in locating the axis of the earth and thereby the earth's orbit, the ecliptic."

In a hasty sketch he further explained the paths of the earth, the moon, and the space ship. Sam was amazed.

"Then the rotation of the sky has ceased for us?"

"As long as the *Gryon* does not rotate," Korf agreed, "no star either rises or sets for us. Of course the moon does not, either, or for that matter the sun, once it comes out from behind the earth."

"Vitruvius once said: 'The sky is that which unendingly revolves about the earth and the sea on a fixed axis.' With this idea the good man went to his grave, and for centuries he was regarded as one of the world's wise men. It is too bad that we cannot invite this learned man to visit us for a quarter of an hour. He would experience something!"

Berger interrupted the conversation: "Shall I check the speed still more, Mr. Korf?"

"What is the speed?"

"Two thousand meters a second."

"For the present let the upper auxiliary exhaust work with one-quarter power. Otherwise the speed would decrease too rapidly."

"Two thousand meters speed?" put in Sam. "Isn't that a good deal less than right after the start?"

"Certainly. At the end of the eighth minute we had reached the parabolic speed suitable for that altitude, ten thousand meters a second. Naturally this speed does not remain constant, but decreases under the influence of the attraction of the earth, at first quickly and then more and more slowly, just as with a stone which is thrown up in the air. But before it is entirely used up, the limit of gravity between the earth and the moon is reached—that is to say, the distance from the earth at which the attraction of the moon begins to be stronger. Then the ship does not fall back to the earth but to the moon.

"This is the whole secret of pushing out into space, just giving a ship this parabolic speed. Then the flyer goes on by itself."

"Well, that is very simple! But why don't we feel anything now of the speed which is still great?"

"What we so keenly felt during the ascent was the acceleration, not the speed, which is not at all perceptible. In your consultation room in Friedrichshafen did you ever feel that you were at all times going in the earth's orbit around the sun at the frightful rate of thirty kilometers a second?"

"Does the earth travel thirty thousand meters a second?" Dr. Finkle became eager, and his interest in astronomy took a visible increase.

"A splendid speed, isn't it?"

Sam's brow wrinkled. "But it doesn't agree, Gus!"

"How so?"

"Where are we going to arrive with our *Gryon*, which is now making only two thousand meters a second, if I just heard correctly? Won't we be so far behind the speeding earth in a very few minutes that catching up will be out of the question?"

"At the first glance, Uncle Sam, what you say seems to be correct. The circumstances are even more unfavorable. It is not only the earth that runs away from us, according to your theory; it is well known that the sun, also, along with all its planets is moving away in the direction of the constellation Hercules, this being at a speed of about twenty kilometers a second."

"Good Heavens, where are we going to arrive?"

"And if we assume," Korf proceeded, "that the sun likewise rotates about a centre which is also moving, then the whole business becomes very complicated, doesn't it?"

### A Stowaway

**T**HERE was a roguish smile on his face. Sam thought hard. He could find no other solution than that the "Geryon" needed to go faster than two kilometers a second.

"Don't wrack your brains any more, Uncle Sam!

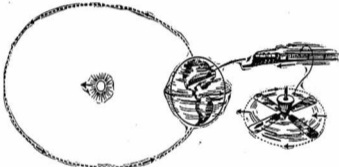
"Up to this point!"

"All right! This caterpillar now crawls from the extreme tip of a blade of the fan to the hub at the maximum speed that it can attain by crawling. It will then reach its goal in a very definite time. It does not need to bother its head about describing a spiral course on account of the rotation of the fan, besides being moved forward by the motion of the train, whirled around by the rotating earth, carried along in the orbit of the earth about the sun, and so on.

"Well, just tell me the absolute velocity of the caterpillar and the kind of curve in which it moves!" Sam scratched his head and did not reply.

"That is exactly the case with us. The blade of the fan is our earth-moon system, and so far as I am concerned the course of the train corresponds to the motion of the earth.

"If the caterpillar wanted to leave the fan to enjoy a bouquet placed on one of the tables, it would



This diagram illustrates the complexity of the motion of any terrestrial object. At the right the caterpillar on the electric fan blade wishes to crawl to the center. But while he is moving the fan is rotating, the train on which the fan is located is moving, the earth is rotating and moving in its orbit and the solar system is moving. But the caterpillar wishing to complete his journey may ignore all motions but his own.

I frankly confess to you that I myself have no idea at what absolute speed, in case there is such a thing at all, our ship is travelling in space. It does not matter at all."

"It matters to me whether Mother Earth escapes us for ever or not. I should not care to stay for all time in your splendid machine, travelling about in the least known regions of space."

Sam seemed to feel a little discomfort, though he said to himself that there must be some error in his calculation.

"Don't worry! The earth is not getting away from us. How shall I explain it to you? In the earth-moon system we have the speed calculated and for the time being nothing else concerns us. You will best understand by an example."

Korf reflected for a while. Then he continued:

"Imagine a dining car in a Pullman train. On the ceiling of the car is an electric fan. On this is a small caterpillar. Do you follow me, uncle?"

certainly have to take into account the motion of the fan; if it even wanted to leave the dining car, because things looked better in the green meadow, it would suddenly perceive and have to take into account that the train was rushing through the world.

"That is just the case with us. If we wanted to go to Mars, then we should have to take into account, beyond any doubt, the orbit of the earth, in order to get from it to the orbit of the neighboring planet.

"What did you say months ago? It is all a question of the relation in which one stands to things. How right you were, Uncle Sam! Here, too, it depends on the viewpoint from which one regards things. Everything is relative in the world, even the purely material things.

"Do you understand now that I do not know the absolute course of our Geryon, and that there is no such thing at all?"



How simple it all sounded? Sam already regretted his silly question and determined henceforth to present his theories more carefully. He could only with difficulty rid himself of his earthly ideas and views. It was hard for him to imagine that phenomena which are incontestable and taken for granted on earth, about which nobody thinks at all, were fundamentally altered here or even made nonsensical.

For a long time he stood at the windows, letting the pure noble world of stars act upon him, while his pensive thoughts were scattered like cosmic dust. Thus the time passed. No experience and no event could disturb the stillness of their cosmos, unless it came from the little group of earthly men. And this even, which surprised all of them without exception, was not long delayed.

From the supply room came violent calls and yells, quick steps sounded, and a sailor rushed excitedly into the control room.

"Mr. Korf," he panted. "There is a stowaway on board! He was hidden among the boxes in the supply room. The cook just found him. He refuses to answer our questions and only wants to speak with you."

Berger jumped up in amazement. "How was this possible? Have the entire crew mustered in the mess room. Woe to the guards that let this man sneak in!"

"Don't get excited, Berger!" said Korf. "First we will listen to the man himself. Of course, if there has been a gross neglect of duty, I shall impose a severe punishment. Bring in the stranger!"

Pushed along by powerful shove, a man stumbled up the ladder. Korf at once recognized in him one of the reporters to whom he had shown the ship shortly before the start. He had been struck by the man's thick, dark full beard, entirely out of style, which grew over his whole face and now hung down to his breast in tangled strands.

Apparently the bold man had taken advantage of an unguarded moment to hide himself, in order to take the trip and be able to furnish his paper with accurate accounts of the journey. He seemed to be in bad shape. He was all used up and bleeding from many cuts, and he could scarcely stand up. Since no springy hammock had protected him during the ascent, he must have been injured by the pressure.

"Your adventure may cost you dearly, sir!" said Korf to the intruder. "Apparently you do not know that I have life and death power over all the occupants of my ship! How did you get into the *Geryon*?"

"I shall give you all the explanation you want, Mr. Korf, in private!" whispered the man, smoothing his disordered beard. The voice was familiar to Korf. This eastern Jewish German he had heard not very long ago. A suspicion passed through his mind.

"Mr. Berger," he ordered, "just take the crew for a while to the mess room."

When Korf was alone with Sam and the stranger, he switched on the light, walked coolly up to the reporter, and with a jerk pulled off his beard, which was false.

"Why did you do it, Mr. Suchinow?"

The green-spotted face of the Russian was unmoved.

"Your trip concerns Skoryna's rescue, Mr. Korf. You would have refused my request to be taken along. But I have to be with this expedition. What else could I do but use a trick? I purchased the card of one of the favored reporters; this unworthy being sold it to me for a not excessive sum. That is all."

Sam hardly trusted his eyes when he saw this man before him. "Have you forgotten our agreement?" he whispered to Suchinow in Roumanian. "You gave me your word that time in Budapest."

"Not to undertake anything against Korf," put in Suchinow, likewise in Roumanian. "I have kept my word and I am still keeping it!"

Korf walked thoughtfully up and down. What did this man want here? He could imprison him or kill him, not being accountable to any court on earth.

"But why did you have to be on this expedition? If you were impelled by scientific interest, then you certainly had a chance to traverse space in your own rocket."

"My contract with the Transcosmos Company did not permit me to go in the rocket. But you are right, it is less interest in spatial navigation itself that impelled me to this adventure than the special aim of this trip—the rescue of Skoryna."

"For which your personal presence was totally unnecessary, Mr. Suchinow. I am inclined to treat you as a prisoner."

"I know that my life is in your hands. Do as you see fit. In a short time you will understand what actually caused me to intrude into your ship. For the present, please excuse me further explanations. That is all I ask."

"Very well! For the time being I shall assign you a cabin which you will not leave without my special permission."

Suchinow bowed slightly. "Thank you, Mr. Korf."

Korf telephoned to Berger, who at once appeared.

"Your mind may be at ease, Mr. Berger. There is no fault to be found with either yourself or the crew. My own carelessness made it possible for this gentleman to sneak on board. He is a French reporter, Monsieur Valé is for the present my prisoner. Take him to the extra cabin and look out for him."

"And one more thing, Berger! Please understand that I will not allow Monsieur Valé to be annoyed by the crew in any way."

When Suchinow was gone, Sam gave vent to his dissatisfaction. "What a shameless fellow! Wasn't it enough that he should use Natalia to . . ." he suddenly stopped and then went on quickly: "He certainly cannot complain of lack of courtesy on your part. Why were you so gentle with him, Gus?"

"Because there was no point to being otherwise. Here he is, and I cannot have him put ashore. I am also convinced that he has no hostile purpose. What could he do? Any move directed against myself or the ship would plunge him to destruction. And I really cannot think what reason he would

have to injure me. I guess that this unexpected addition to the number on board is connected with the mystery about which you have forbidden me to speak. So we shall simply wait calmly—there will be an answer to the question."

## CHAPTER XVII

### Free From Gravity

THE next few hours of the trip to the moon passed without any special events. Outside the space ship nothing was to be seen but the stars shining brightly on the black sky and the yellowish disk of the moon, still low on the equator and apparently getting no nearer.

At first it was surprising to Sam that the course of the ship was not actually directed at the moon. But his newly acquired astronomical knowledge made it possible for him to calculate with some difficulty how fast the moon was moving in its orbit.

"By the time we get where the moon will be when we get there, the moon will be there, too!" was the excellent result of his figuring.

Then he withdrew to the smoking room, the only place on shipboard where he could busy himself with his beloved pipe otherwise than platonically. He lay smoking away comfortably in one of the hammocks which were used here as in all of the rooms of the ship. Now for the first time he felt perfectly comfortable. The strict rule against smoking in the carrousel had kept him from feeling a really unmixt joy of living.

The attraction of the distant earth became less and less. The loss in speed became constantly less, and the activity of the rocket exhausts was decreased accordingly. The decreasing pressure was becoming noticeable.

All objects lost weight, apparently. Limbs became free and light, while there was no alteration in the muscular power which was attuned to terrestrial conditions. The engineers playfully lifted in one hand the heavy steel cylinders in which the liquid oxygen was kept, the moving of which had hitherto required a windlass and block and tackle. A joyous existence commenced for the cook in the electric kitchen. He could now drop plates and cups as much as he pleased: they slowly floated down to the floor and were not broken.

Soon these phenomena increased to such an extent that Sam, desiring to finish his rest after smoking, had to pay for his leap from the hammock with a severe bruise. He had struck the cabin ceiling, three meters above the floor. And when he turned the water faucet to wash his hands, the fresh liquid indeed sprayed out into the basin as usual, but the drops rebounded, rose into the air, and spread out as a fine vapor all through the room, finally sinking slowly to the floor and moistening everything.

Korf had indeed prepared him for all these phenomena. Yet he could not restrain a slight start, when every heedless step developed into a tremendous jump upward.

"Gently, gently!" he commanded himself. "Don't exert too much force and don't be in a hurry! You will simply get bruised."

His medical interest was awakened by a peculiar pulling sensation in the region of the chest and stomach, by the unusually accelerated beating of the heart, and on the other hand by the striking insensibility to pressure and blows, for establishing which there was ample chance. He conscientiously investigated his body, connected up his observation with the balance-organ of the human system, the chalk bodies floating in the semi-circular canals in the inner ear, made further investigations, and sought for teleological explanations. Sharply and logically he drew his conclusions. He was struck by the clarity of his thoughts and the speed with which his brain worked.

But these bodily phenomena soon lessened. There remained only a certain freedom from all feeling of discomfort, which expressed itself in his splendidly happy and unconcerned frame of mind.

The ladder to the carrousel he took in a single bound without any effort. Going down was changed to a gentle downward glide, without touching the steps. Sam could not help thinking of a dream which he had had incessantly since his youth, which still reappeared at longer or shorter intervals. Mighty swimming strokes with his arms and legs used to lift him in these happy dreams over trees and houses, and he gently floated down, by making the right motions. This dream had now become reality, something he had never thought possible, but with a difference: his "flight" was here interrupted by the ceiling, which opposed premature and painful limits to it.

The crew now went about in the ship almost exclusively by floating, and frequent cries of pain from the ceiling showed that it is hard for a person not to use the strength given him by nature. Sam could not keep back his laughter. The orderly grinned, the cook, the crew, and everybody showed the most delighted faces. Even Berger seemed to have got over his anger on account of the stow-away.

"To-day I have become twenty years younger, Gus!" cried Sam, as he floated like a ghost into the little casino which was connected with Korf's cabin and served as the officers' mess room.

"Stop right there!" replied Korf with a laugh. "We are not equipped to care for infants."

"It is simply great to travel around the universe this way!"

"Yes, one is tempted to turn somersaults and to slide down banisters like children," remarked Korf, pushing away from the ceiling, which he had approached by a careless move.

"One can rightly sing: 'We led a life free from care! Free even from gravity!'"

### Sam Learns the Mysteries of Space

AT dinner there were mad scenes. The soup swam around in the air in tiny drops, until they learned to carry the spoon slowly to the mouth. A slight push on the table leg raised the entire table into the air. The general rising after the meal produced a wild confusion of chairs and persons whirling around in the room. In among things Berger's little parrot was fluttering around the lamp, screeching anxiously, and carrying his cage along on his

wings. After that the cage had to be tied down, to prevent mishap.

"Just tell me, Gus," cried Sam through the uproar, "how much do I really weigh now?"

Korf tried to suppress his own limitless amusement, which was hard to suit to the dignity of the commander of a ship.

"We now have from nine to ten centimeters acceleration pressure, that is to say, one one-hundredth of the normal gravity on earth. What weighs one hundred pounds on earth is here reduced to one pound. We couldn't get more than a pound and a quarter out of you, Uncle Sam!" He looked at his watch. "It is time for us to go above. I am expecting the sun soon, and we do not want to miss this spectacle!"

Then he turned to Berger: "Have you extinguished the outside lights?"

"Yes indeed, Mr. Korf!"

"Perhaps there will be a little fright on earth, when the *Geryon* suddenly disappears. But we must be a bit economical with our supplies of energy. Besides, the sun will soon make us visible again."

In the carrousel the electric light was extinguished except for a small lamp over the switchboard. Korf did not turn on the other lights, since he did not want to interfere with the observations outside. On the windows was the silvery glow of the moonlight, softening the darkness. The location of the earth was only to be distinguished by the dark starless spot, which spread out almost directly below like a hole in the starry canopy.

Korf and Sam sat on chairs screwed to the floor, holding firmly to the arms. On account of the lack of weight, it would have been otherwise impossible to remain standing quietly at the windows. The slightest movement would have started them floating off.

"Gus," said Sam, breaking the stillness, "there is something else that is not clear to me."

"I am not surprised. A great many events are puzzling to me, too."

"I mean the decrease in weight. If I, as you say, weigh only a pound now, that is no reason for me to float about in the room like an angel. A pound is, after all, a weight that is in the habit of falling to the floor very rapidly."

"That is where you are bringing up a subject which is hard to explain. You must first know that weight is nothing but hindered motion. You know that the earth attracts all bodies. A stone lying on the ground cannot follow this attraction; it presses on what is under it. It has weight which exactly corresponds in value to the acceleration which it would experience if it were not supported. On the surface of the earth this acceleration is the same for all bodies. A stone dropped from a church tower sinks five meters in the first second, fifteen in the second, twenty-five in the third, and so forth—ten meters more every second. To be more exact, nine and eight-tenths meters. From your school days you doubtless recall this figure nine and eight-tenths, which is called the normal acceleration on earth.

"In the first three seconds the stone accordingly falls forty-five meters in all. If the objects in our ship possess only one one-hundredth of their normal weight, in three seconds they fall only the same

number of centimeters. But that is no longer falling, simply gentle gliding down."

"I understand perfectly. And does this decrease in weight come from the greatly weakened attraction of the earth so far off?"

"This is a plausible supposition, but it is not correct. The slight remnant of weight we owe entirely to the activity of the exhaust pipes, which to be sure are directed in the same way as the diminished gravity."

Sam started. "Do you mean that our weight depends merely on your gas lever, and that we will be weightless as soon as you feel inclined to set the lever at zero?"

"That is just what I mean!" agreed Korf calmly.

"But see here! Just consider that you cannot shut off the attraction of the earth at will! Or can you?" cried Sam desperately.

"Of course I cannot!" said the engineer, much amused. "The attraction of the earth is effective, even though it is weak at this distance."

"Now I am eager to see how you will make sense out of this confusion," remarked Sam, shaking his head.

"Listen! If I shut off the gas lever, then the ship and all that is in it yields to the attraction of the earth. It becomes like a freely falling stone, which is not supported and therefore is weightless."

"A fine prospect! Then we would fall back again to Lake Constance!"

"We are saved from that by the high speed which we so painfully secured. We would then describe a gravitational curve—the infinitely prolonged line of a parabola or rather a hyperbola. We would certainly make a free fall, not downward with increasing speed but upward with decreasing speed!"

"Fall upward?" stammered the physician. "Listen, Gus! For Heaven's sake, stop! I am getting dizzy. These 'explanations' will drive me crazy!"

He held his arms out in a defensive gesture; he had had enough of it. Korf pressed the excited doctor back on his chair and said soothingly:

"Permit me just one more remark, Uncle Sam. Keep this firmly in mind: we are always weightless when nothing influences the *Geryon* in its natural motion, neither mechanical power from within nor air resistance from without, no matter how near we may be to the earth or to any other heavenly body. . . ."

A cry of amazement cut short Korf's conclusion. "Gus, see this arc of fire down there! The earth!"

#### A Dawn In Space

DOWN in the depths there was flaming forth a monstrous fiery arc extending halfway around the circle. At the extreme right edge of the earth's disk the sunbeams were appearing, making radiant outshoots in the atmosphere, and flashed in sheaves of light against the dark interior of the earth, the edge of which arose circular and deep black from the sea of light of its corona. It looked as though the mighty black disk of the earth—at this distance apparently twelve times the size of the moon and comparing with it like a hen's egg with a pea—had begun to glow at the edge and was shooting out immense sheets of flame.

Insignificant and tiny, the sickle of the moon



Down in the depths there was flaming forth a monstrous fiery arc extending half-way around the circle. At the extreme edge of the earth's disc, the sun beams were appearing, making radiant outshoots to the atmosphere.

floated at one side of the vast arc of light of the brightening earth. In amazement the occupants of the ship watched the fabulous spectacle, from the impression of which the dullest soul could not have escaped.

Korf telephoned to the orderly: "I invite Mr. Valé to come to the carrousel."

Sam cast a look of understanding at his brother-in-law. It would have been cruel to have kept anyone from this sight, this impression never to be forgotten.

Suchinow soon appeared, bowed slightly, and sank like the rest into silent wonder.

The splendor of the earth's sickle increased. At the top of the arc the sheaves of light seemed to be uniting into so blindingly brilliant a point that it was painful to look at it—and slowly the sun appeared from behind the earth. It had become impossible to look at the dazzling light without colored glasses.

"Attention! It is daybreak for us!" Korf's call brought their attention back to the ship itself.

Daylight was in the room. From below the sunbeams came in and cast bright yellow spots of light on the circular ceiling. The mats which covered some of the windows were glowing like translucent curtains.

After a trip of eighteen hours in darkness and night, daylight had set in, to remain faithful to the *Geryon* on the rest of the journey. Bright warm sunshine flooded the lighted side of the ship, while the shady side continued in deep darkness. A sunny, ever cloudless day was shining through the windows on the side toward the sun, but the opposite windows were veiled in black night. Day was not like that on earth.

There was no blue sky spread out above the *Geryon*. The firmament, in which the stars were shining peacefully, was deep black. Even very close to the sun one could make out all the stars by merely covering the white hot disk with the thumb. If such a ship had been available to Copernicus, he would not have had to go to his grave without seeing the planet Mercury.

The objects struck directly by the sun's rays—the external frames of the windows, for example—shone with a supernatural phosphorescent glow, in sharp contrast with the black sky. They reflected the light into the interior of the ship. It had finally escaped the last effect of the earth, its shadow.

## CHAPTER XVIII

### Cold Space

UNCEASINGLY the lonely space ship pursued its course through space, every hour increasing by thousands of kilometers its distance from the earth. The shining crescent of this planet was growing fuller and fuller, showing in plastic form the spherical shape.

So far as there was no hindrance through clouds, it was possible to make out the forms of the continents on the illuminated portion. Their brownish contours were sharply contrasted with the darker oceans. In the regions north of the equator the dull brown of the continents faded into light greys, because of the winter snows in the northern hemi-

sphere. The north pole itself was veiled in the darkness of the polar night.

For hours Sam sat at the eye piece of the great telescope, which was now pointed directly down. He was watching the continents slowly emerge from darkness at the inner side of the crescent of light, pass across the bright part, and then disappear again at the outer edge. The rotation of the earth could be observed as well as the motion of the setting moon can with some patience be followed from the earth. In the telescope, spaces as big as a metropolis appeared as barely perceptible points. Identifying localities was made easier by the shadows of the mighty mountain chains of the Cordilleras, the Alps, the Carpathians, and the Himalayas.

"How fine it would be," he once remarked, "if we only had a powerful telescope that could distinguish separate houses down there. Then we could see about things down in Friedrichshafen, control the course of airships, and thus be something like a deity. A little turn of the screw, and the eye jumps from Bucharest to New York!"

"Be patient a little while, Uncle Sam, and then you will have this giant telescope at your disposal," replied Korf, moving his arms about and shivering. "As soon as we can leave the *Geryon*, I shall build outside a combination of lenses that will be ten times stronger than the greatest telescopes on earth. There is no dim, light-consuming air to prevent using any enlargements we like. But don't you find it uncomfortably cold?"

In fact, the temperature in the ship had already sunk below the freezing point. The heat evolved during the passage through the atmosphere had long since been radiated into space, and the electric heating devices could no longer replace the constant losses.

"I have a very simple means of producing any desired temperature," continued Korf. "I only need to catch the heat of the sun. But . . ."

"What 'but' is there? It will not hurt the sun to give us a little of its surplus heat."

"Not the sun, of course, but Heyse and Vaccarescu!"

"For Heaven's sake, Gus, have you lost your reason? What in the world do Heyse and Vaccarescu gain from our freezing here?"

"Assurance that the *Geryon* still exists."

"I do not understand that."

"It is very simple, just the same. You surely noticed before the ascent that the outer wall and the wings of our ship are painted black on one side, while on the other they are brilliantly polished and mirror-like. At present the mirror side is turned to the sun and reflects not only the sun light, thus making us visible on earth, but unfortunately the sun's heat as well. If I now turn the ship so that the black half absorbs the sun's rays, the heat comes in. On the other hand, it is hindered from radiating into space by the shiny coat which will be on the shady side. This will make it warm in here, but on earth people will vainly look for the *Geryon* and will rack their brains over the question of where we have gone. The trifling amount of light reflected by the rough black side will hardly suffice to penetrate the atmosphere of the earth. Anyway,

we are already more than one hundred and fifty thousand kilometers distant."

"Well, it is a very bad situation!" grumbled Sam. "Couldn't we avoid disappointing them this way by increasing the artificial heating?"

"To reach an endurable room temperature, starting at two hundred and seventy degrees below zero, in a ship the size of ours, would require such an amount of heat that we could not possibly produce it with the artificial means at our disposal. We must give up the idea. There is nothing to do but hide for a while from the observers on earth."

"And how do you manage this turning?"

"Between the cabins and the tank rooms are three immense driving wheels. The axes of the driving wheels are at right angles to each other, as in a three-dimensional compass. If the wheel the axis of which coincides with the long axis of the ship is rotated clockwise, the ship turns counterclockwise, according to the law of action and reaction. In this manner the ship may be given any desired position in space by starting the proper driving wheel. Of course these wheels have to rotate very fast. If the ship is to make a complete turn in a minute, the wheel must make a number of revolutions as much greater as its mass is smaller than that of the whole ship."

Korf had the gyroscope motor started. A dull humming commenced, which came to a higher pitch and finally sounded very shrill. Slowly, almost imperceptibly, the sun and the earth moved laterally around the ship. After a few minutes the revolution was completed. The shrill whistling became a hum, and soon there was silence.

As before, the sunlight came through the windows from below, diagonally, but from the opposite side. If a person had not been informed of the change, he would scarcely have noticed anything.

Thus it was that mankind became anxious and terrified and considered Korf's space ship lost.

From hour to hour the activity of the exhausts was lessened, and the movements of the passengers of the *Gryon* became more and more problematical. Walking on the floor had ceased; somersaults in the air were the regular procedure; any movement like a shove resulted in quick motion sideways or up in the air. It was possible to remain on the floor only by extremely careful creeping and holding on to the hand-holds which were provided everywhere.

On the second day of the trip, weight had sunk to a thousandth part; accordingly the weight of a person was only about seventy grams. Sam was just sitting in the smoking room, when Berger floated in and joyfully invited him to take part in the first flight from the ship—a flight in the truest sense of the word. He felt a bit uncomfortable at the idea of leaving the protective covering of the ship and trusting himself to nothingness. But the enterprise had a great attraction for him, and his curiosity was greater than his anxiety. Besides, he had now become so used to weightlessness that unpleasant surprises in this respect were hardly to be feared.

In the central room the rubber suits were all prepared. Korf was already dressed, except that he

still held his helmet in his hand and examined it carefully.

"The pressure is now so slight," he explained to his hesitating brother-in-law, "that we can stay with the ship out there with an acceleration of only a centimeter a second. That implies no danger."

#### The Space Pedestrians

THEN he gave a few more instructions and impressed on Sam and Berger, who was also to take part in this first flight, the necessity of returning to the ship at once, as soon as they felt the slightest difficulty in breathing. He explained the use of the telephone wire, which was coiled up and hung on the breast of the suit. One end of the wire ran to the inside of the helmet and was attached to a microphone there. The other end was to be connected with one of the numerous plugs which were placed all over the outside of the ship.

"Do not forget," were Korf's final words, "to plug in the wire first of all. Then we can speak to one another or communicate with the men on board, and in case of need we can pull ourselves back to the ship by means of the wires. Let's go!"

When Korf had convinced himself that the helmets fitted properly, he opened the inner door of the exit chamber and had Sam and Berger enter. Then he carefully closed the door and turned an air valve, through which the air escaped with a whistling sound. The rubber suits puffed out, so that the little chamber had scarcely room enough for the three expansive figures. A turn of Korf's hand, the outer door opened, and the three men slipped out into outer space.

Sam cautiously crept along the smooth steel wall and looked for a plug. He had scarcely made the connection, when he heard Korf's voice. It seemed to come from a great distance, though all three of the companions were within reach of one another.

"Uncle Sam," said the voice, "do you understand me? How is your breathing?"

"Perfect! How about Berger?"

"Berger is all right," the latter announced. Thus communication was established.

The three figures clasped hands and commenced their wandering around the ship, while the wires easily ran out from the coils. If they had not already been accustomed to weightlessness, the first heedless step would have carried them far from the ship. It was only with difficulty that they succeeded in remaining within reach of the ship.

"What is that?" cried Sam in amazement. "What has happened to our space ship?" In terror he pointed in the direction of the exhaust. The slight motion had been enough to disturb the equilibrium. He gently floated away from the ship and slowly hovered off into space.

"What is the matter?" asked Korf, who also could no longer hold on and was floating off with Berger.

"Well, see how our proud *Gryon* looks now!" continued Sam. In his eagerness he did not notice that he was moving away. "It is as short as a burned out cigar stub, and two of the wings are gone!"

Berger snickered. It sounded in the telephone like a cough. Korf also laughed.

"A burned up cigar stub? A splendid guess, Uncle Sam! The cigar actually did burn up during

the ascent. That is to say, we cast off the two burned out auxiliary rockets."

In a moment the wire had run out to its full length, stretched taut, and held the three men like captive balloons at a distance of thirty meters. The sunlit helmets and suits gleamed in the absolute darkness with an unearthly phosphorescence. Day and night had joined in a seemingly impossible union.

Geryon. He had a feeling of boundless freedom and delight. He would have enjoyed shouting aloud, in spite of his fifty-odd years. It was splendid to see his covered limbs glitter in the sunlight against the deep black background of the starry sky.

His ideas of up and down were passing away. Only a slight pull in the direction of the exhaust reminded him that there was still a down. Still, but not for long! In a few hours they would reach the limit of gravity. Then the motors would be silent, and even this last reminder of terrestrial conditions would vanish.

"Uncle Sam!" sounded Korf's voice suddenly. "Look out for the exhausts! The wire does not reach to the stern of the ship, but it might break. You might burn your suit in the currents of gas, which would most seriously imperil your life!"

"I shall look out!" answered Sam, turning around. He started slightly at not seeing Korf. He had not thought of the fact that he had telephoned.

Returning into the ship went in the same manner as leaving it. When they had got into the chamber, Korf let air come into it from the ship by means of

It was an indescribable pleasure to examine the earth with this simple telescope and to view the cities enlarged many thousand times. It was even possible to make out the chief buildings.



The ship looked like a gigantic winged egg, a strange gleaming monster, in its course through space. At the blunt end a brightly shining white trail of mist was coming out.

"How do we get back?" asked Sam, after he had satisfied himself as to the shortening of the Geryon.

"In the pocket of your pneumatic suit you will find a small repeating pistol," was the reply. "Shoot it, and the recoil will put you in motion. You could also pull yourself back by means of the wire."

Sam followed this advice, and in a short time he was back at the ship. Reassured by the success of the "steering shot", he began to circle about the

a valve in the inner door, until the pressure was normal. Then it was easy to open the inner door. After that the flyers could take off their suits and exchange experiences and observations without using the telephone.

"Wonderful!" said Sam. "It wasn't even cold out there!"

"The layer of air in the expanded suit is a good protection against the loss of heat," agreed Korf, "and if the suits hold the air long enough, there is not the least danger. Did you notice at all that our ship is travelling eighty kilometers every minute?"

"No!" answered Finkle, surprised. "I never had

the idea—that we were travelling at all and not at some other health resort up in space.”

“It is just another case of the old story of the caterpillar and the electric fan. So far as we are concerned, the Geryon is standing still, while the earth moves away and the moon comes nearer. This only holds good so long as the motion of the ship remains even and is not too much accelerated mechanically. You might just as well not think of it.”

In separate groups the crew was now taken out and shown the simple tricks and manoeuvres. Likewise Suchinow, who was no longer confined, was given a suit. It was not long before all on board the ship were accustomed to spend most of their time out in space, and whoever was not prevented by his duties climbed around on the wings or sped around in outer space like birds in the air.

Now Korfi set about to make the promised giant telescope. A shaded concave mirror a meter tall was fastened by long metal bands several hundred meters from the ship. The reflections of the mirror were caught by an eyepiece in the window of the control room, and the telescope was completed. By means of a cord the mirror could be moved in all directions from the eyepiece and could be directed at any desired points.

It was an indescribable pleasure to examine the earth with this simple telescope and to view the cities enlarged many thousand times. It was even possible to make out the chief buildings. Only the rotation of the earth carried the focussed points beyond the field of vision so rapidly that it took much practice to be able to follow the motion of the objects by means of the primitive cord.

The last remnant of gravity vanished, when on the third day after the start the rocket motors were entirely shut off. The Geryon had reached that region in space where the almost imperceptible attraction of the earth is equalized by that of the moon, now rather near. It now obeyed only the laws of gravitation, like any ordinary celestial body, and fell with increasing speed toward the moon, the disk of which now far surpassed the earth in apparent size.

There was absolutely no more of up and down.

Anything not fastened down in the ship floated freely in the cabins. The men swam in the air, paddling with their arms and legs, if there was no wall in reach, to which they could cling. The idea of going to bed was meaningless: it would actually have required a great exertion to remain in bed. They slept, floating in the middle of the room. Sam floated about, smoking his pipe. The parrot floated in its cage with folded wings.

Drinking became a test of skill. To empty a bottle there was only the possibility of sucking out the liquid, like little children, or of sending out the contents by rapid turning of it. The liquid then floated in the room in the form of a sphere, which had to be caught in the mouth and sucked in.

Chairs and tables were put aside and fastened down in a corner. The hammocks were rolled up, and the rope ladders were removed, since they could no longer be used. A person needed nothing for comfort but free empty space.

Only the limited operating time of the oxygen vaporizer in the diving helmet and the necessity of eating hindered permanent staying outside the

ship. In this state of affairs it is not surprising that many did not even notice that the mighty moon, which in the meanwhile had become round, was rising higher and higher above the central line of the ship, until it hung laterally above the carousel, stretching out in the sky in a threatening expanse.

## CHAPTER XIX

### The Rocket Sighted!

THE nearer the Geryon came to its goal, the more restless Suchinow became. The impenetrable mask which he always wore fell off, disclosing the careworn face of a nervous, tormented person. Incessantly he surveyed the surroundings of the moon and its masses of “land,” which were spread out in the sky in the bright sunlight, constantly increasing in extent as they came nearer.

Waste lands and plateaus cut by wide gullies were alternated with sharp-edged craters and mountains with jagged cliffs, the dark shadows of which indicated enormous heights. No woods, no sea, and no river broke the monotony of the dreadful waste. From the north pole to the southern edge, as far as the sunlight reached, there was nothing but bare ground, looking dried up, and steep mountains. No lighter patches indicated snow or ice, and not the tiniest cloud prevented a complete view of the wrinkled and shrunken countenance of the airless old satellite.

For fourteen terrestrial days the sun shines uninterruptedly upon the bizarre mountains of the moon, blazing down on the land, and producing a temperature like that of boiling water. For fourteen days the dried up waste then sinks into night and incomprehensible cold. It is no wonder that one would vainly search this inhospitable companion of the earth for animal life, to say nothing of beings like men.

In the northwestern part of the disk there opened up the ring-shaped mountain of Copernicus, enclosing with several concentric lines of mountains a wide volcanic crater, the floor of which showed still more dark openings. The bare crests of this mighty mountain chain towered more than four thousand meters above the surface of the moon, casting jagged shadows on the masses of debris close by.

A dark spot within the wide crater caught Suchinow's eye. Was he mistaken, or was the spot really moving? Now it had reached the edge of the crater and was creeping away across the mountain chain. Was it really not a dot on the moon but a body floating in space between the moon and the Geryon?

Suchinow could not see clearly. The excitement of many months was concentrated in this moment.

“The rocket is in sight!” was the cry of the outside observer through the telephone.

“The rocket is in sight!” repeated the man posted in the upper room, loudly, so that it rang through the ship.

Suchinow clenched his teeth. “Be calm!” he murmured. “It is necessary now!”

In the telescope the long torpedo-shaped rocket, which had kept the world expectant for almost half a year, stood out sharply against the bright surface of the moon. Its course was toward the northwest, and in a short time the rocket would pass beyond



the disk of the moon and would disappear behind it after describing a narrow loop.

Korf went up to Suchinow. "We are close to the goal, sir!" he said. "Would you like to take part in the operations?"

"I ask permission to do so!" replied the Russian with feverish eyes. "In what way do you intend to reach the rocket?"

"First the speed of the Geryon must be increased to that of your rocket. This is already being attended to. The ship is being attracted by the moon and diverted in its path. Now it is describing the curve of a narrow Kepler gravitational parabola, with the moon at the focus, and is coming constantly closer to it. At the same time our speed is being constantly accelerated by the free fall."

"The distance of the rocket from the surface of the moon seems to be not quite eight hundred kilometers. Accordingly the distance from the centre of the moon may be assumed to be about two thousand five hundred kilometers. It is possible to let the Geryon gravitate around the moon in the same orbit?"

"Absolutely! But we have not as yet the necessary speed to catch up with the rocket. I regard it as surer to approach as close as possible to the moon, to attain the utmost possible speed."

"And then?"

"Then we shall pass close by the surface of the moon and draw away from it again, until we strike the path of the rocket behind the moon. But then we shall certainly have a higher speed than that of the rocket, which can be braked at the right moment by proper use of the exhausts. It will of course not be easy to approach the little rocket in the great Geryon, but in any case it is better to have too much speed than too little."

"Wouldn't it be simpler," put in the Russian, "to stop the Geryon in front of the moon by means of countershots, in order to wait for the rocket right there?"

"That might be so. But in this case we should have to wait until the rocket completed its course about the moon. Besides that, it would require the expenditure of an almost unattainable amount of energy, first to stop the Geryon entirely, then to hold it motionless in spite of the attraction of the moon, and then again to accelerate it in the path of the rocket, which we unfortunately cannot influence. And without absolute equality of speeds coupling on the rocket is simply out of the question."

#### Back to Gravity

KORF gave orders to call all the men on board and to make the Geryon all ready to manoeuvre. He personally convinced himself that the rocket chambers, the gas chambers, and the gyroscopes were all ready, and then he returned to the carrousel. At this moment he was only the technician and commander to whom a dangerous and difficult problem had been given, the solution of which demanded all his thoughts. Thus he did not notice how Suchinow watched the manoeuvres, pale with excitement and in feverish tension.

"All right!" came through the speaking tube from the engine room.

"Take charge of the gyroscopes, Berger! Keep

the main exhaust directed straight at the centre of the moon!"

The driving wheels began to sing, the ship slowly turned on its short axis, and the moon apparently sank down until it spread out directly below the carrousel. The Geryon was now rushing through space, with one wing forward.

Korf kept his eye on the scales which showed the position of the compasses.

"At present our course indicates five degrees to the east of the moon. But see, the direction is gradually changing more and more toward the moon."

The moon came nearer with uncanny speed. Each individual mountain top could already be made out with the naked eye, and the yellowish landscape reached out of sight in all directions below the Geryon, looking like a waste of clay and stone. Since the vertical axis of the ship was pointed straight at the moon, while the course was obliquely inclined, the masses of the moon seemed not only to rise from the depths but also to come up sideways. This produced the impression that the gigantic moon was rolling upon the Geryon. The nearer the ship came, the more strongly this rotary motion affected the observers, who had to look away at times, to avoid becoming dizzy at the sight of the approaching land.

The rocket could no longer be seen from the carrousel; it had already entered the shadow of the moon.

"If we are lucky," remarked Korf, without taking his eyes from the compass scales, "then we shall succeed in cutting the path of the rocket so that we shall catch up with it behind the moon.—Isn't that so?" He stopped speaking, cast a glance at the plan of the flight curves, and said to himself, "The prearranged course does not quite suit!"

The course ran close by the moon; it even brushed the solid ground.

"If the exhaust fails now, we shall plunge helplessly upon the moon!" he exclaimed. His hand grasped the gas lever.

The ship gave a leap. With a crash chairs and tables overturned to the floor. There was a crash of broken dishes in the kitchen.

Dr. Finkle, startled out of his nap, rushed into the control room.

"For Heaven's sake, what is wrong?"

Korf did not answer. He was testing the course of the ship.

"It is all right!" said he, drawing a breath of relief. "We shall pass the moon one hundred kilometers away! Since we have no atmosphere to go through, there is nothing more to fear at present."

He called into the speaking tube: "Have the ship examined, Berger, to see whether anything has happened."

Korf ran his hand through his hair. "We have won the first trick!" he remarked, while he slowly pushed the gas lever back to zero. "You got a good scare, Uncle Sam, didn't you?"

"Oh, not too much. But what happened? Why did everything fall to the floor all at once?"

"I had no time," replied the commander, "to give any warning to those on board. I hope nobody was seriously hurt."

"Probably there was some broken glass and a few black and blue places. How was it that weight



Five streams of fire shot into space with tremendous violence. They cast the ship upward, the plaything of cosmic forces. The surface of the moon sinks down. In this moment not a breath rises or falls, not a heart beats.

all at once came back and took us out of all the clouds without any gradual transition?"

"'Clouds' is good!" said Korf, laughing. "You must mean the smoke clouds in which you are accustomed to bathe. Anyway, it is all over, and this impulse of weight was only a fraction of our normal weight on earth. We simply got unaccustomed to it out in space and lost the use of our organs of locomotion."

"Won't you finally . . ."

"Oh, yes!" put in Korf quickly. "Just see how close we are to the old moon! What is more natural than our getting to feel its influence?"

"But why so suddenly and intensely?"

"I let the auxiliary exhausts work for thirty seconds at half power, to correct our course. That is all. I seem to have made a slight error in my calculations beforehand."

"And now?"

"We are falling around the moon, close to it. Have your camera ready. You will be able to take home such landscapes as no traveller on earth has in his snapshot album."

Berger's entrance interrupted the conversation. "Two men are in their cabins, taken with space sickness," he reported. "Otherwise everything is all right, except for a few broken glasses."

"Presumably they both stood on their heads at the moment of impulse," said Sam, going to see about the invalids.

Korf turned to Berger. "Have everything tied on that is not riveted on, and warn the crew about more surprises. If possible, have everyone in the hammocks. It is very possible that we shall have to change course several times more."

Meanwhile the surface of the moon had turned further. It was awe-inspiring to see the mountains increase in size and roll by at an uncanny speed. New strips of land kept rising up and passing by at the side. Each chain of mountains seemed about to catch up with and overwhelm the one before. Only men completely free from dizziness could bear to keep watching the grandiose sight of the apparently moving masses.

Sam reappeared. "The sick men will be all right. As soon as their stomachs are empty, they can walk again. You must keep food out of reach! The men are eating too much and moving about too little."

### A Narrow Escape

SUCHINOW stood motionless at the window and stared down. The green dots on his pale face stood out unpleasantly.

"Soon we shall have below us regions of the moon never yet seen by the eye of man!" he said. Then, after a while, he added, "Except Skoryna!"

Sam was lying on his stomach in the hammock, as he always did when observing the "world below". "Gus," he called out anxiously, "how high are we above this nutmeg-grater down there?"

Korf smiled at this peculiar but rather apt comparison. "Just a thousand kilometers, Uncle Sam! We shall descend to about one hundred kilometers and then go upward again. If the moon had an atmosphere, we might feel some heat during this speedy passage."

The rotation of the "nutmeg-grater" became slower and then became an even lateral advance. In the distance mountains appeared on the horizon, moved on, and disappeared in the other direction at the edge of the moon. It was a quickly changing panorama. Gradually the sunlight became weaker. Dense darkness had long been in the deep craters. Only the summits of the mountains now emerged brightly from the twilight. They were nearing the border-line between day and night.

"It is becoming evening down there!" said Korf. "For the region over which we are just flying, the long lunar day is drawing to a close."

He viewed the surface of the moon, then turned to the compasses, turned to the optical distance measurer, and again observed the speeding landscapes. There was evident anxiety on his face.

"What is the matter?" asked Sam.

"It is remarkable! We have passed the point where we should be nearest the moon and we now should be rising!"

"Well?"

"The distance from the moon is again lessening. It is unexplainable! Let us wait a moment!"

Slowly, to be sure, but perceptibly they were again nearing the moon. The mountain peaks, rising from the twilight and gleaming in the sunlight, flew past more quickly, a sure sign that they had come nearer.

Anxiously and hastily Korf examined the instruments. "I can't understand!" he murmured, and his glances wandered undecided between the scales and the great mass of the moon.

In fact merely looking out already aroused the sensation of falling. In the direction of the flight immense dark mountains were towering up on the horizon. The Geryon was flying toward them, one wing ahead, in its mad course. The increasing darkness added to the dreadful sight.

Then Suchinow sprang up. "Can my suspicion . . ." He did not finish the sentence.

A leap like a tiger—a grasp of the hand—and the gas lever went up to its full extent.

Fall gas to all the exhausts!

Korf seized his arm, too late!

A frightful shock hurled everything down. The acceleration indicator raced up the scale, going far, far beyond the red line.

Five streams of fire shoot into space, with tremendous violence! They cast the ship upward, the plying of cosmic forces! The surface of the moon sinks down. Suchinow lies on the floor, like a crushed worm!

In this moment not a breast rises and falls—not a heart beats.

Korf has clung to the switchboard, clinging to it with a superhuman exertion. Lights dance before his eyes, and a glowing millstone presses down on him, crushing his bones.

Between moving blue veils he sees the gas lever. He seizes it with his teeth and pulls it back. Then he sinks down, while the pressure falls.

The tops of the mountains rush past below, almost within reach. The twofold danger is over.

Glassy eyes seem to ask what returning consciousness does not yet understand: What happened?

Within the ship there was a devastated lock. The tremendous recoil had hurled everything to the

floor and smashed such things as were not in some way fastened. The frightful pressure had lasted only two seconds, but that had been long enough to crack chairs and flatten fruit tins.

Panting, Korf slowly picked himself up.

"That was very close to death!" he uttered painfully. "I thank you, sir, for your quick action. In a few seconds more our ship would have been smashed against the moon."

Suchinow looked about in confusion. Several minutes passed before he could speak. "Yet I should have been a murderer, if you had not taken a hand! Pardon my folly! I never dreamed that the *Geryon* could develop seventy meters a second acceleration."

"It was necessary! Only this risk could have saved us. Of course, if the fearful pressure had lasted even ten seconds, none of us would ever have seen the earth again!"

The half-stunned crew again recovered and at once set out to investigate the devastation in the ship. The hull of the ship itself had had no injury. It was built to stand the most extreme pressure. Likewise the apparatus and instruments, being placed on springs, had remained undamaged. The damage to the furniture could be repaired after a fashion.

"I confess," said Korf, turning again to the Russian, "I am not quite certain about the cause of this deviation!"

"The *Geryon* did not deviate from its course. I am convinced that this second approach toward the surface of the moon has a reason outside the ship."

"In the moon itself, then?"

"Yes! An idea which often used to take up my mind was the question why the moon does not rotate but always presents the same side to the earth. Now my suspicion has been confirmed. The moon is not a sphere but an ellipsoid, flattened on the side toward the earth. It is a body somewhat like an egg, with the long axis always pointed toward the earth. The tips, accordingly, have never been directly recognized by any earthly astronomer. If you now assume that the *Geryon* first passed by the bright central belt in its course, afterward going by the shaded rear protuberance, which is unluckily also provided with very high mountains, then all the events of the last few minutes are absolutely explained."

"You may be right," said Korf thoughtfully. "Your hypothesis fits in all respects. This egg-shaped moon must necessarily always turn the heavier side, therefore the which is flattest toward the centre of attraction, the earth. Accordingly it appears circular to the observers on earth."

"I hope that we shall pass the side of the moon on the return trip at a corresponding distance; then we shall recognize its circumference and find my hypothesis directly confirmed," added Suchinow. Then he sank again into his usual silence.

## CHAPTER XX

### Uncertain Hours

IT had also become dark in the *Geryon*, and absolute night lay about the ship. The sun had vanished behind the moon. The earth, which (like the moon, under normal conditions) might have

given some reflected light, was for the present hidden by the dark masses of the near-by satellite.

With increased speed the space ship sped through the shadow of the moon, away from its surface, which in the darkness could not be seen. The unwanted darkness, together with the after effects of the shock they had just undergone, made the occupants sleepy. And when the exhausts began to operate again weakly, to force the ship into the path of the rocket, the pressure also made itself very unpleasantly noticeable. Even though it did not reach the normal terrestrial gravity, the passengers of the *Geryon* had become unused to weight. Just as during the ascent, it seemed as though there were lead in all their limbs. A dull pressure in their heads enfeebled their thinking, and unconquerable weariness fell upon the crew.

Soon all were in a heavy sleep bordering on a stupor. Suchinow, Berger, and Korf struggled with all their might against this exhaustion. In any case they had to avoid letting the *Geryon* pass uncontrolled by the orbit of the rocket, which would delay the rescue of Skoryna for days.

The ship had now been so turned that it raced through space with the exhaust-end first. Consequently the currents of gas exercised a braking effect. It was accordingly a question of changing the parabolic course of the ship to a circle by slow decreasing of the speed.

Berger was just nodding, when Korf's words startled him: "The moon is seven hundred kilometers below us. The height above the land is increasing only very slowly. I hope that we can soon let it gravitate freely."

A fine yellowish light was falling into the carrousel. The earth was rising behind the moon and spreading out its gigantic crescent, four times as large as the crescent of the moon which is reflected on clear nights in the waves of Lake Constance.

After a while Korf depressed the gas lever. The space ship was now floating about eight hundred kilometers above the mountains of the moon and was increasing this distance only very gradually. Its course was considerably curved about the moon, indeed not yet circular; but a further lessening of speed would have decidedly increased the difficulty of catching up with the rocket.

"For finer corrections," remarked Korf to Suchinow, "we must wait until we see the rocket. For the moment there is nothing to do but let the *Geryon* gravitate freely in an ellipse which is not much different from the circular path of the rocket."

Since the ship was again completely given over to the free play of natural forces, the pressure sank and absolute weightlessness was restored. The awaking sleepers found themselves and their resting places floating again in their cabins.

Soon after that the first sunbeam came through the windows. Far below the edge of the moon was lighting up strongly, and the spectacle of the awaking earth was repeated on the moon. But the flares of a corona, which had encircled the rising crescent of the earth, were absent because of the lack of an atmosphere. There were now two brilliant crescents floating below the ship, the earth and the moon. For the moment the moon, being nearer, had the upperhand in its fantastic size.

The crew became quickly gay, now that the pres-

sure had disappeared and weariness had gone, like the oppression of a bad dream.

"The sun seems to have gone crazy!" was Sam's criticism, as he was sitting at coffee with Korf and Berger. More exactly, he was floating around the casino chasing the brown globes of liquid. "When we were first fortunate enough to see it, it was down below. When we were hurrying to the moon, to scrape by it, it shone into the carousel splendidly. Now it is squinting in at the side again, in a shamefaced manner. I should not have thought the centre of our system capable of such leaps. And the worst of all is that Mother Earth, whom I always considered a steady reliable lady of mature years, has become infected with these extravagances. Not to mention the moon, for this old chap is going his own way and is even bold enough to approach our earth!"

"You seem to be in a good humor, Uncle Sam!" remarked Korf. "It is not so very long since a certain person sneaked off to his cabin, very depressed!"

Sam grinned. "I cannot stand that accursed weight any more. I am all for the freedom and independence of space!"

"But how will it be when we return home and Dr. Finkle again weighs his hundred and thirty pounds and his fifty-six years begin to assert themselves once more?"

"Keep still, Gus! I beg of you! It worries me when I think of it. But there are a few days more before that."

"Do you think so, Uncle Sam? We now are on a course which would take us to the earth in twenty hours. We could also have more acceleration, once we pass the neutral zone and use the attraction of the earth."

This outlook seemed to afford Uncle Sam only a moderate degree of pleasure.

"When we have the rocket," he remarked, "there will be no great hurry about returning. Couldn't we take a little excursion to Mars?"

"Has the earth become too small for your taste for wandering? Yet how you hesitated to come on this trip!"

"That is explained by the inertia of matter, Gus. When I am sitting, I sit tight and I am hard to get to rise. When I wander, I remain wandering until some compelling circumstance stops me. As a physicist and master of gravitation, you must perceive this!"

### The Rocket Captured!

SUCHINOW was sitting at the lookout, searching for the rocket. By using proper braking and directional shots, it had been possible to keep the *Gryos* about nine hundred kilometers from the surface of the moon and to force it into an elliptical path which for a long distance was the same as the orbit of the rocket. Since the *Gryos* had now a considerably higher speed than the rocket, the latter would certainly be overtaken, sooner or later.

Suchinow gazed eagerly in the direction of flight and soon saw, at the side of the moon, the bright point he had sought. It seemed to be coming nearer. He at once informed Korf.

"We have been fortunate," he cried in a voice hoarse with emotion. "The rocket is gravitating

parallel with us a slight distance away."

A fleeting flush of pleasure was on Korf's face, as he now adjusted the telescope in the upper lookout and now plainly recognized the shape of the shining torpedo.

"Very well," said he, "the difference in our speeds is no longer very great and can be equalized. How long is your machine?"

"Eight and a half meters!"

"Eight and a half meters," repeated Korf, "with a visual angle of sixteen seconds! That corresponds to a distance of . . . of somewhat over a hundred kilometers," he went on, after a brief calculation. "That is still too far!"

Nearer and nearer came the rocket. They could already recognize the slim cylindrical shape without using the telescope. Korf moved the gas lever. "We must put on the brakes a bit more, or else we shall shoot past it!"

Suchinow operated the measurer of distance, his hand trembling on the screw.

The distance of the torpedo lessened to just three kilometers. Then the drawing closer stopped. The courses were now exactly parallel, both the *Gryos* and the rocket gravitating freely about the moon in concentric orbits.

"We might of course come a bit closer," said Korf to Berger, "but it would be dangerous. We cannot stop the rocket, and the great *Gryos* cannot manoeuvre quickly enough to be certain of avoiding a collision. Now get over there quickly, before the distance again increases."

A wave of excitement swept through the crew. The great moment had arrived, the moment which the world had awaited for months in anxious impatience.

Since the space ship, with exhausts cut off, was circling freely in space like any ordinary meteor, with no artificial influence to disturb the play of natural forces, the proximity of the moon was no hindrance to leaving the ship.

Kinetic energy and the attraction of the moon determined the motion of the *Gryos* and forced it into the curved gravitational path—the same forces as operated on the passengers and sought to move them in the same manner. As long as no artificial influence disturbed the dynamic equilibrium, no force drew the men who left the *Gryos* away from the ship, any more than the walking stick of a man falling from a high mountain has any inclination to leave its possessor during the fall. It remains at an unchanged distance from him, as long as the free fall lasts.

The rocket and the *Gryos* seemed to lie still side by side, just like two express trains running side by side at full speed. A passenger on one express can shake hands out of the window with a passenger on the other. He can bridge the gap between the two trains with a board and pass from one train to the other. Nothing but the current of air, the road bed rushing away behind, and the noise of the rolling wheels would remind him that the whole system is in motion. Relatively to the rocket, the *Gryos* was motionless, and relatively to the *Gryos*, the passengers leaving it would float motionless in space.

Korf remained on board as commander, to be able

to correct at once any deviations in course which might arise during the expedition.

"Who is to attend to the coupling-on of the rocket?" asked the Russian hastily.

"Berger and two men. But if you would like to take part, there is nothing to prevent it. Only you must not lose any time in preparing."

Half a minute later the four men were already slipping through the chamber into space. Instead of telephone wires they had coils wound with long thin wire, the ends of which were fastened to the ship. Besides that, each was provided with a pistol and sufficient blank cartridges to keep their course to the torpedo by means of shots and in case of need to return quickly like little living rockets.

Scarcely had they reached the side of the *Geryon* which faced the torpedo, when Suchinow slowly bent his knees, touched the steel wall with his fingers, and eyed the course like a sprinter about to start. With all his might he sped off, with Berger and the two sailors following immediately. Quickly the four figures, puffed out like balloons and shining in the sunbeams, became smaller and smaller and finally shrunk to shiny floating dots in the black sky.

After five minutes Korf saw through the telescope how they braked their flight with a few counter-shots, reached the rocket, and fastened the wires. The first connection, a loose one, was established. One of the four, apparently Suchinow, was constantly circling about the tip of the torpedo, as though trying to view the interior through the windows.

"I wonder whether he is still alive!" murmured Sam, who was watching beside Korf and keeping his eye on him with a care that showed his paternal affection and also a certain anxiety.

"Why ask a question just now, which has already, God knows, cost me enough sleepless nights?" replied Korf in an effort to overcome his impatience. "In a short time we shall know the truth."

### The Rocket Opened

MEANWHILE the great cable-drum had been taken outside and screwed on to the ship. A sailor unwound the cable and fastened the end of the wires leading to the rocket. Drawn from the other end, it wriggled through space like a glittering snake. Breaking of the wires was not to be feared, since weightlessness prevented any resistance. The sailor at the drum only took care that the cable ran out easily and without kinks. Slowly the cable crawled over to the rocket and was there cast around the steel hull and tied fast. The flash of a light-signal, sent by a pocket mirror, showed the observers in the *Geryon* that the fish was caught. The cable was wound up, became taut, and floated the mass of the rocket along slowly.

It came into view, a narrow steel cylinder about three meters in diameter. In front it was pointed and provided with windows all around the end. In back it had four great fins which during the flight through the atmosphere had served as stabilizing surfaces.

Korf ordered Berger to take charge of the controls and went out with Sam. There it lay, the mysterious body which had been shot into infinity months before—now captured and confined—conquered! It was

only a dark wart on the immense hull of the *Geryon*.

But what of Skoryna?

No one said the question aloud. The windows of the rocket had become frosted on the inside and were no longer transparent. Nothing moved in the lifeless steel shell. Within arm's length was the poor tortured person—whether alive or dead—for who could tell? At present he was still out of reach in his dungeon.

Korf examined the circular door, which was just large enough to admit a person headfirst.

"The door is indeed fastened from within," said Suchinow, who immediately on returning had connected up with the telephone system of the *Geryon*. "Still it should be easy to break open. But how? If the air within escapes, he will at once be killed, since he has no pneumatic covering. If he still is . . ."

He did not complete the sentence. He again kept trying to look through the frosted windows.

"The simplest thing would be to take the whole rocket inside the *Geryon*," replied Korf, "but our entrance chamber is too small for that. There is nothing to do but fasten on an air container, to make the double doors necessary for entering. Be patient a little while longer!"

He immediately made the necessary arrangements. He had foreseen this difficulty and had taken along the proper equipment. An airtight metal pipe, just big enough to hold a man, having a pneumatic door at the end, was welded on to the rocket. This was done in such a way that the door of the rocket was inside the pipe. Then a mechanic crept in, carrying tools and an extra rubber suit. Behind him the outer door of the pipe was securely fastened. It was no easy task for the man, working in the narrow space, but weightlessness made it less difficult for him. Soon the inner door of the rocket lay open.

## CHAPTER XXI

### The Yogi

SCARCELY was the body of Skoryna, unrecognizable in the rubber suit, safely within the ship, when the order sounded through the telephone, "Everybody on board!"

It was high time to start the exhausts, in order to retain and make use of the present favorable course to the earth and to avoid being carried around the moon again. A slight downward pull showed that technical means were again at work, carrying the ship away in opposition to the gravity of the moon, toward the earth, homeward.

Skoryna had been carried to Suchinow's cabin and given over to the doctor's care. Korf was for the time being so occupied with his navigation that he had no time to think of the person rescued. At the equilibrium point between the moon and the earth, which he hoped to reach in a few hours, he intended to continue the work on the rocket. It was to be welded fast to the surface of the *Geryon*, to prevent breaking loose in landing.

As for the rescued one, was he really saved or was he dead? Had help come too late?

Sam appeared in the control room, pale, trembling in all his limbs, depressed, as though he had some dreadful news to report. An anxious suspicion seized Korf. "Is he dead, Uncle Sam?" he asked hesitatingly.

"His heart still beats," replied the old doctor shyly, "but it is a wonder that he still lives. It is the strangest

phenomenon which I ever saw in all my practice." He stopped speaking, as though seeking for words.

"He is still alive?" cried Korf, and a burden fell from his heart. "God be thanked that we did not come too late!"

"I should not like to say so definitely as yet! He is in a dreadful condition."

"Speak up, Uncle Sam!" insisted Korf. "How is he? Is he—has he lost his reason?"

"A kindly fate has saved him from the worst thing, madness. No, it is not that!"

After a short pause, during which Korf's eyes never left his face, he went on:

There were now two excellent crescents floating below the ship, the earth and the moon. The moon being nearer had the upper hand in its fantastic size.



in his fingers. If Skoryna had no longer fulfilled this important duty, there was no doubt that he had been unable to do so.

Sam prevented his reading the book at the moment. "Wait a little longer!" he said. "You can make an exact study of it later. First let me finish my report. Skoryna is reduced to skin and bones, the image of a corpse. Yet he breathes, weakly but perceptibly. His body is not in any way injured. Meat broth carefully given will perhaps bring him back again to life and consciousness. I also have a valuable ally in the absence of weight."

"Do your best, Uncle Sam.



"Can you imagine a person lying unconscious for three months, without taking any nourishment, and still living? Living? Being alive now?"

Korf passed his hand over his forehead. "Did you say three months, Uncle Sam?"

"The ship's log proves it. The last entry is on November 21st, a few days after he sent the call for help to the earth. Then his strength, not merely physical strength, but rather the strength of will and hope, seems to have left him. It was well for him to sink into unconsciousness, to think no more, hope no more, have nothing more to fear. It was well for him, and I hope it saved him. It spared him the last result, despairing of help there in the frightful loneliness."

Korf seized the little notebook which contained Skoryna's hastily written daily notes—the log book which every ship's commander fills out with painful exactness, as long as he has the strength to hold a pencil

You must succeed in saving the life of this pioneer of spatial travel."

"Nothing shall be overlooked," murmured Sam anxiously, as though he still had something on his mind. To gain time, he then said, "Have you ever heard that a human body could endure that? Three months without food! In India there are actually said to be fanatical Buddhists who let themselves be buried alive, to rise again years later as famous yogis. I always thought that fabulous. I travelled long enough in Bombay and on the Ganges, but I never saw a yogi who did not prove, on closer view, to be a clever trickster. But haven't we found a real yogi in Skoryna? I have tested it with the most varied theories. The weightlessness of gravitating bodies, the extreme cold in the rocket, the uncontested fact that with low temperatures albuminous cells have a prolonged life—perhaps all this

can and even must have led to a preserving of the body. But these are only superficial hypotheses, and the exact investigation of this riddle shall be the task of my later years."

"The main thing, to be sure, is that Skoryna is alive," remarked Korf. "Why and how are for the moment minor details!"

"For the moment, yes! But this question will allow me as a doctor just as little rest as the problem of the space ship has for many years in your own case."

"Can I see Skoryna?" asked Korf suddenly.

Sam appeared startled. In evident embarrassment he tried to evade the question. "Wait until Skoryna is stronger. You might be terrified at the deathly face, which hardly suggests a beating heart."

Korf was struck by this almost unmotivated pretext. "I am not so easily terrified, Uncle Sam!" He did not hide his amazement. Finkle turned to another subject. His embarrassment was actually surprisingly evident.

"What do you think about Suchinow? Have you really considered why he sneaked into your ship and in this way compelled his participation in the rescue trip?"

"Why this discussion? It is natural enough for him to have the greatest possible interest in the salvage of his hapless machine."

"Not merely the machine but rather the passenger?"

"Well? Isn't that a human feeling?"

"I believe I see through the riddle. Suchinow is—Skoryna's father."

Korf looked up in surprise. "To be sure! But why has he kept so still about it? He had no reason to conceal that he is the father of a clever and admirably bold young man."

"Well, so far as I know, Suchinow has no son."

An angry flush mounted to Korf's face. "What do you mean by this confused introduction?" he cried to his brother-in-law, who, it was evident, was keeping something back.

Sam bent his head and wiped the sweat from his brow.

"One more question, Gus! What do you think about Nataika?"

Korf straightened up and his eyes flashed threateningly. "You know more than you say! My word binds my lips. I have, for the sake of Skoryna, promised to keep silent about Nataika. But you truly make it hard for me to keep my promise. Speak or be silent! One of the two! But stop giving these confused hints!"

"Gus, you gave me your word, and you have kept it. You have never since then spoken about Nataika. But did you also promise never to speak with Nataika?"

"What do you mean?" cried Korf, staring at Sam as though at a ghost.

"You will, I hope, soon be able to speak with Nataika. She is in the cabin of Suchinow, her father."

Korf fell back as though thunderstruck. "I guessed," he groaned, after an anxious pause, "that Nataika was connected with Suchinow. But it never came to my mind that it was she for whom I was making my rescue expedition."

"I have been sure of it only for half an hour!" replied Sam timidly.

"Go! Go! Leave me alone!" exclaimed Korf roughly. Finkle withdrew, his mission finished.

#### Skoryna's Diary

FOR a long time Korf sat motionless, his head in his hands and his arms resting on his knees. The scales fell from his eyes; the foundations of the world seemed to totter. All was now clear. She had come to him as a spy, to listen to his ideas, to copy his invention, to steal his intellectual possession in a common tricky way! And this woman had been dear to him; he had loved this woman with all his heart and had trusted this sneaking traitress unsuspectingly with his secret. A sob escaped him.

Probably—no, certainly—she herself had set fire to his laboratory, to conceal the traces of her theft. And the attempted rescue, the burned hair and clothes, had been a mere comedy, the trick of an actress, to lull the simple German to sleep! And then she went to Berlin. Yes, it all agreed—wonderfully! This Mertens with the drugstore was put forward to keep him from following her; the supply of letters had been written to keep him quiet!

And what of himself? He had believed everything, taking everything for genuine, until Sam at Mother Barbara's had instilled the first doubt. A dreadful anger seized him, anger at the woman whom he had loved. He felt anger at Sam, who had knowledge of this network of deceit and had hidden the truth from him until this hour; anger at himself, for letting himself be fooled; anger even at his ship, which had been built with the money of this scoundrel on whose errand Nataika had deceived him. And Suchinow?

This green-spotted scamp had even been so bold as to sneak aboard the Geryon, to use this construction also at the earliest opportunity and to pass it off as his own work. The stupid German neither hears nor sees anything, and one may take all sorts of liberties with him.

A hoarse laugh came from his throat, sounding as shrill as the note of a cracked bell.

"You shall yet find out what I am, the whole crowd of you!" muttered Korf between his teeth. The characteristic Teutonic rage blazed from his wide open eyes.

He hoarsely called for Berger and gave him the charge of the ship until further notice. Then he locked himself up in his cabin.

The examination of Skoryna's log book distracted his gloomy thoughts. His eye at first passed mechanically over the firmly written lines, which he still had in mind from the letters. Then technical interest awoke in him, and with increasing attention he went over the clear account of the mad flight. The cosmic and technical phenomena were judged with admirable accuracy, and the appended tables giving the readings of the measuring devices provided valuable scientific material.

The notes began on the eighth of September, the day after the start.

.... "I do not know what is the matter with me. My forehead is all sweat, and my hair sticks to my face. Where am I?" ...



.... "I must have been unconscious. I lost my senses in the frightful heat." . . .

Korf found his suspicion confirmed. During the rapid ascent through the atmosphere the rocket had been overheated. If in the Geryon, starting relatively slowly and provided with good cooling apparatus, the heat of friction had been oppressive, how must it have seemed in the tiny rocket as it sped along! There was also an explanation of the failure of the lighting system:

.... "At last I have found the disturbance in the electrical system. The lead plates of the storage batteries bent because of the high temperature during the ascent, causing a short-circuit." . . .

Then followed descriptions of the earth rising in the sunlight, observations regarding the diminishing gravity, and determinations of position by taking the height of the stars.

.... "I can no longer be mistaken in seeing that the speed calculated has not been attained. Perhaps the machine would have had a higher degree of efficiency by using several exhausts instead of one." . . .

Korf felt confused. Had Suchinow then failed to use this simple and decidedly best construction of the powder-rocket? In excitement he read further.

.... "I cannot pass the limit of the earth's gravity without using considerably more acceleration shots than were calculated. Can I venture to use up the reserves to such an extent?" . . .

.... "The thermometers indicate eight degrees below zero; at this temperature there seems to be an equilibrium between the access of heat from the sun and the radiation into space." . . .

.... "I have now circled about the moon just eight hundred kilometers from the surface. My course is a closed ellipse. Without using tremendous amounts of energy I cannot reach the limit of gravity. What shall I do now?" . . .

.... "For the third time I am going around the moon. My father was right; the moon is not a sphere but a pear-shaped body. —The solitude is intolerable, and the absolute silence rings in my ears like the roar of the Danube. —I cannot make up my mind to return to the earth; the remnant of energy cartridges would not be enough to hinder the free fall, and death would be certain." . . .

What dreadful torments Skoryna must have undergone! The only alternatives were to seek a quick death by plunging through space to the earth or gradually to fall a victim to madness, there in solitude!

.... "Has anyone on earth seen my light-signals? Great Heavens, what if no one is able to bring me aid! Who is there to rescue me? My father? In a second rocket he will meet the same fate that has come to me. The amount of fuel which may be carried is slight. The only person for whom I hope is Korf. But how long will it be before he constructs his new invention? If I were certain that Korf is coming, if only a single word could reach me from the earth, then it would be easy to wait. But doubt, this fearful doubt of the possibility of my rescue from my prison is crushing me!" . . .

The following notes became more and more scan-

ty, and the illegible handwriting suggested a weakening of strength.

.... Shall I not rather bring about the sure end? Better a horrible end than an endless horror! Is my mind becoming a blank page?" . . .

.... "I am getting tired. I talk with myself, to hear a human voice, and then the sound of my voice terrifies me." . . .

.... "God in Heaven—if there is a God—protect me from madness!" . . .

An absolutely illegible scrawl followed as the last entry. Doubtless the pencil had then slipped from the limp fingers.

Korf was utterly confused, as he laid the log book aside. The most contradictory feelings were surging within him. This woman had been terribly tried. The most refined torturer of the middle ages could not have devised these torments which Nataka had had to endure, in absolute solitude, in empty space.

He could not refuse her his pity and his respect. Still, she had betrayed him and lied to him. She had abused his confidence and trampled his heart under foot! In his mind there yawned a deep gulf, which seemed to him not to be bridged and which pained him infinitely.

Sam knocked. "Gas!" he cried, when he found the door locked.

"I wish to be alone!" said Korf harshly.

"Nataka has awakened. Won't you see her? She is asking for you."

For a while there was silence in the cabin. Korf was passing through a terrible combat with himself. This struggle lasted for whole minutes. Then the door opened.

"All right, I'll come!" he cried hoarsely.

Then he silently followed his brother-in-law to the bedside of this woman, whom he loved with the constancy of a man of thirty, whom he hated with the anger of an honorable man who has been shamefully cheated, and whom he admired as a martyr.

## CHAPTER XXII

### Nataka

**I**N the corridor Suchinow sneaked past. Korf looked through the man as though through glass.

Nataka was alone in the cabin when Korf and Finkle entered. Pale as a ghost, she was floating upon the bed, just held fast a little by the slight weight. She scarcely breathed, and her eyes were closed. Her glistening short black hair contrasted strangely with the sunken white face. Now and again a faint flush, coming and going like a shadow, colored her cheeks and testified that life had returned.

Minutes passed. Without moving, Korf gazed at the sharp features in which he could only with difficulty recognize the sweet face of his assistant. How this poor creature must have suffered! Pity overcame his anger.

Then Nataka opened her eyes. The long silken lashes cast narrow shadows on the lower lids. The pale face seemed suddenly changed. The great brown eyes looked around the room searchingly and then rested on Korf. A tender smile beautified her

mouth, which had been pinched in as though in pain, and her lips opened.

"Korf!" she murmured. "He has come!"

The sound of these few words, the liberated happy smile, and the deep sigh of a breast taking a breath of relief touched Korf to the heart. How Natalka must have longed for him, who alone could bring her help! But again a bitter thought came to his mind and hardened his heart. Yes, she had indeed longed for him, the technician, the rescuer! But what of Korf the man, whom she had mistreated?

"You are saved, Miss Weisz!" he said coldly. He himself felt the flatness of his words.

"By you! How I thank you!"

This sounded so tender and true that Sam could not understand how Korf was able to reply coldly:

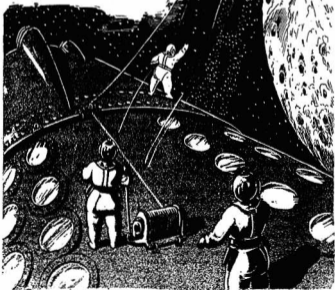
"Whether it was I or some one else, is indifferent to you. I only did my duty as a man!"

"I know," whispered Natalka, "you did not suspect who Skoryna was. Allow Natalka to thank you for saving Skoryna."

"I am speaking with Skoryna and I accept his thanks."

"That means then that—that you reject Natalka's thanks?"

The brown eyes were anxiously fixed on Korf, as though awaiting a judgment. Korf looked down and did not reply.



Slowly the cable crawled over to the rocket and was then cast around the steel hull and tied fast. Then the cable was wound up, became taut and floated the mass of the rocket along slowly.

With a groan the invalid fell back, while Sam bent over her, greatly worried. Then he whispered to his brother-in-law: "Any excitement is bad for her! Don't you see how you are torturing her?"

Korf gave the speaker an icy look. He was thinking of the day when Nataka visited him with Mertens—the day when he had felt the most terrible disappointment in all his life! Had Nataka asked then whether she was not perhaps torturing him?

"Then you cannot forgive me?" continued Nataka, and her question sounded like a plea. But Korf remained silent.

After a while Nataka straightened up. She seemed stronger, as she said in a clear voice:

"It is true. I am asking too much of you. But no criminal is judged without having a chance to justify himself. Will you hear me?"

When Korf nodded agreement, Nataka whispered with trembling lips, "August Korf, of what do you accuse me?"

Korf looked up in surprise. "Do you ask me that?" he answered in amazement, and yet it seemed to him that it would be hard to formulate an accusation.

"Yes, I ask you that, and you must answer!"

A strange uncertainty came over Korf. What was he to say? What did he really know? What had this woman done to him? The energy cartridge! Did he really have any proofs? And if so, had not Nataka just demonstrated at the hazard of her young life that this invention was worthless? After his victory by means of the detonating gas propulsion, what did he care about an invention that could no longer mean anything to anyone? It would now be ridiculous to make this affair the subject of an accusation. But what then? His thoughts were confused. His violent reproaches, which had been clear to him a few minutes before, had crumbled to dust at the simple question: "Of what do you accuse me?"

"You do not answer?" said the tired voice of the invalid. "Very well! Then I shall tell you your grievance against me." She remained silent a short time, to collect her strength for what she had to say.

"Did I not find out and steal your ideas? Is not the cartridge which operates my father's rocket your invention? Is it not your intellectual property?"

Korf made a gesture of indifference. "It is not worth mentioning. The powder rocket is played out."

"A sad end, indeed, for the shot into infinity! But what remains of my crime, if you cast aside with a wave of the hand my theft of your invention?"

Confused and embarrassed, Korf stood before the invalid. He had come as a judge, and now he was put to the question like a schoolboy who has not learned his lesson. What remained of his accusation?

Was he to cry out his pain at having his love disappointed? That would simply make him ridiculous!

Nataka smiled a little. "Listen, August Korf, I will confess to you. You shall learn everything."

### Light from Nataka

OLD Sam had taken good notice of the change which was taking place in Korf. In excitement he waited further developments. Although he as a physician was insistent on keeping the patient from all harmful emotions, he said to himself that speaking things out clearly was far preferable to gnawing uncertainty.

In short sentences, broken by pauses of exhaustion, Nataka commenced:

"I do not conceal from you that I came to you on behalf of my father—to find out from you what we had long lacked to conclude our work of years—the necessary energy container of sufficient capacity to operate the rocket. I found more than I had dared hope. Your ideas intoxicated me. I recognized in you a genius far superior to my father's intellect. My most daring dream seemed near fulfillment by your invention. I forgot my father's pressing errand, I worked with you and for you on the complete solution of the problem to which my father had devoted his life and which was also the aim of my existence. I wished nothing further than the quickest possible completion of your—our—work, the building of a space ship, to conquer the universe—with you—through you!"

Korf saw the structure of his doubts tottering. He listened intently to the soft but clear words of Nataka. After a pause she went on:

"I should not have been a woman, if I had not felt that you saw something more in me than just a helper. And the hot blood of Hungary would not have flowed in my veins, if I had let this discovery pass without any impression on me!"

"Nataka!" cried Korf, trembling with emotion. But the invalid continued undisturbed.

"But ambition and eagerness for accomplishment overcame all other feelings in me. That is a spiritual inheritance from my poor restless father! You hesitated to use your work. You refused foreign capital, and in impoverished Germany you could not secure the necessary funds. Impatiently I longed for the building of a model which could be put to practical use. You seemed satisfied with the scientific solution. But I longed for the deed—the great liberating deed, to mark an epoch in universal history!"

"And when I then saw that in your German thoroughness you were making no more progress and that no impulse, whether right or wrong, would set you in motion, to put the results of your genius before the world, I felt a boundless disappointment. You needed to steal, August Korf! To effect your end, stealing or any means at all should have been right to you, in order to bring to pass the wonder-work of the ages. It was a crime against mankind that national honor and trifling pride as a citizen meant more to you than this noble work. Nations rise and fall, ideas and opinions change in the course of time, but in the beginning comes the deed! It outlasts time, it creates epochs, it is the centre about which peoples and ideas are grouped.

"My father's letters reached me in this frame of mind. I had written him that you had solved the problem, and this brief message had caused him to act. He had found a financier, the Roumanian Romano Vacarescu. The construction of the Suchinow rocket had started. Then I made comparisons be-

tween him and you. There was my father, the man of iron energy, inspired with boundless ambition and an immeasurable will but with limited intellectual gifts! And there was yourself, the scientist, the genius! You had the means and did not know how to use them to the utmost end. In such moments I hated you! My father would have hesitated at no crime, if it had been necessary to realize his ideal. I, his daughter, have been a thief, to advance the cause which I served. I cared nothing for my father's personal glory and still less for yours! My life was dedicated to this work, and I think I have proved that this is not mere words.

"I have sacrificed more than my honor as a citizen—I gave up happiness for the great work."

Korf was amazed to hear the revelations of a great soul, which he to be sure did not understand in all respects. Yet he began to have a feeling that in morality also there is perhaps a limit of gravity, at which the idea of up and down loses its meaning.

"After the unlucky burning of your laboratory I doubted whether your machine would ever be built. According to bourgeois ideas it was wrong for me to leave you at the time which was most difficult for you and your work. But what is right—what is wrong? They are ideas set up by human beings, who come and go! I saw you work, seek, weigh, and investigate—and the time set my soul on fire.

"I had collected your ideas, and in Berlin, at the home of my married sister, I carried them out painfully. My exhausts were differently constructed than yours—but that did not at all change my theft of your basic ideas and your powder-mixture in the energy cartridges. I placed my plans before my father and described them as stolen from you. I was forced to this half lie, since my father would have mistrusted my own constructions. Rightly, too, as the fate of our rocket has proved!

"Believe me, my acts were never directed against you, the man Korf. Under any circumstances—by means which you know—I had to keep you from seeking after me, which might have been dangerous to my father and consequently to the work."

For a time Nataika remained silent in exhaustion. Then she continued in a voice full of emotion:

"The goal is now reached. The space ship is speeding through the ether, and I am happy that it is after all Korf's work which has won the victory. And if my call for help from the moon helped to speed up your construction, then I gladly take upon myself the judgment of the world, and I am proud of my deed!"

Korf had long since lost his proud bearing. With lowered eyes he had listened to Nataika's confession. Her words rang in his ears, and he bent his head in shame—in shame because of the revealing of a soul which was stronger than his own.

"And if you really have done wrong," he cried, when she was silent, "those frightful weeks up there in horrible loneliness would outweigh a murder!"

There was a faint sorrowful smile on Nataika's lips.

"They mean nothing," she said softly, "compared with the anguish of my heart when I introduced my brother-in-law Mertens to you as—as my husband. That was my hardest sacrifice."

"Nataika!" stammered Korf, his heart almost too

full for words, and he covered the hand of his loved one with kisses.

Old Sam felt that he was one too many, and he quietly withdrew. He was no longer worried about his patient, since joy is the doctor's best aid.

"The good fellow has a lot to learn yet!" he murmured to himself. "He is always flighty, one way or another!"

Then he looked for Suchinow, to tell him that his daughter was out of danger and to feel his pulse.

## CHAPTER XXIII

### Flight

THE Geryow had again reached the neutral gravity zone between the earth and the moon.

The moon was becoming smaller and smaller, until it was again a yellowish disk floating in the black sky, while the earth increased in size proportionately. Since the space ship during its manoeuvres around the moon had been carried along a bit in the moon's orbit, it was now approaching the earth on the return trip more on the side toward the sun, and the crescent of the earth seemed fuller. More than half of its disk was already shining in the sunlight.

Berger, who had taken charge of the ship for the time being, was just considering whether it would be right to shut off the exhausts altogether at the limit of gravity and submit the Geryow to the attraction of the earth, or whether it would not be more sensible to get Korf's opinion first. Just then Sam came up to him.

"Why so grim a face, my dear Berger? We are homeward bound!"

"Grim, doctor?" said Berger with a laugh. "Not that I knew of! I was just reflecting whether I had better disturb Mr. Korf. I should like some directions as to what to do."

Sam touched Berger's arm. "Not now! Leave him alone, and act on your own judgment! I shall be responsible."

"Is it true, doctor," remarked Berger confidentially, "that Monsieur Valé is not a French reporter?"

"What do you mean?"

"I think he is the Russian rocket inventor, Suchinow."

"How do you know?"

"Well, I was thinking about his peculiar behavior. For a newspaper man he had a bit too much technical knowledge and interest in the doings of the ship. And then there was the way he talked about the rocket, which he knew perfectly well inside and out before we had even attached the cable to it. Then I said to myself that there was something queer about it. And the cook told that he had read in some Lindau newspaper, before we started, that the constructor of the famous rocket had been badly gassed during the war and in consequence had remarkable green spots on his face. So it was not hard to assume that . . ."

"It certainly fits together, my dear Berger, and he actually is Suchinow. Anxiety about his rocket brought him on board our ship. And do you know who Skoryna is?"

"The conductor of the rocket?"

"Not a conductor but a conductress! Skoryna is not a man but a girl, the daughter of Suchinow!"

"Good Heavens! All honor to her!" cried Berger.

"What a girl! Really a girl like that might please even me, certainly far better than the ladies of Friedrichshafen, so crazy to be married, who just knit beautiful stockings, drink coffee, and wait for some one to come along and take them away! Bah!"

"Yes, we must take off our hats to her. Isn't that so, Berger?" Sam grinned to himself, well satisfied. It was important that Natalka should not be misjudged. "Do you remember the assistant who used to work with Korf?" he went on.

"Of course," said Berger, "she was a Miss Weisz, if I remember rightly. She had a clever head, this assistant, much better than many an engineer in the airport. I believe that Korf was very sorry when she went away."

"Now listen! Skoryna is none other than this Miss Weisz!"

Berger's mouth was wide open in amazement. "What! The assistant went to work on her own account and . . ."

Sam put in with a laugh, "And this girl took in some of Korf's ideas and imitated him all of a sudden. What do you say now?"

As well as might be in the absence of weight, Berger slapped his thigh and cried:

"She is even better than Korf! Now I am not surprised that Korf was a bit fond of his assistant. They are worthy of each other!"

"That is what I think!" agreed Sam, well pleased. He was satisfied. Respect for Natalka's accomplishment seemed to prevent any distorted views. Of course he had to admit to himself that the opinion of Berger, an enthusiastic sailor of air and space, did not determine how the world at large would judge Natalka's acts.

"But what I wanted to ask, Berger, was whether you had seen Suchinow?"

"A quarter of an hour ago he got a rubber suit and went out to his rocket! He probably has various things to tinker with on it."

Since Sam had nothing better to do, he determined to leave the ship also for a little trip. He circled around the *Geryon* close to it and looked in at the windows. There he saw Natalka, smiling happily, hand in hand with Korf, who was eagerly speaking to her.

"I beg a thousand pardons!" said Sam, snickering to himself. "I will not intrude!" He turned quickly away and soon reached the bow of the ship.

"Well, what is the matter there?" he cried in astonishment, when he saw the rocket floating some distance away, unattached—freed from the ropes that held it. Suchinow was just creeping into his machine through the air container which had been attached.

"Stop! Where are you going?" cried Sam. In his eagerness he did not notice that no one could have heard his words. Persuaded by the absolute weightlessness, he had not put on a telephone wire and was therefore not connected with the ship's telephone.

Suchinow did not pay any attention to Sam but vanished into the rocket.

"What are you doing with the rocket?" he cried again, of course without any effect. With a mighty leap he sped from the ship toward the rocket. It was too late. A dense white cloud was suddenly

formed in space, and the speeding torpedo was already vanishing in the distance.

Suchinow had fled.

The airless space, absolutely impervious to any sound, had made it possible for the rocket to leave at full power without anybody being able to hear the explosions.

Sam was in the dense cloud of fine ice crystals, formed by the discharges of the rocket. A white impenetrable mist surrounded him. The rocket had disappeared, and there was also nothing to be seen of the *Geryon*. Fine needles of ice clung to the leather covering of his pneumatic suit, besides sticking to the quartz lenses of the helmet. He had completely lost his sense of direction. In whatever way he looked, he could see nothing but the grey mist.

#### Lost In Space

"I CERTAINLY miscalculated to-day!" he said to himself, by way of reproof. He tried with a couple of pistol shots to escape from the mist, which no current of air was scattering. Unluckily he had taken the wrong direction, and when he had emerged from the clouds, he saw to his terror that the *Geryon* was floating in the far distance and was going farther and farther away. His own speed was constantly carrying Sam off in the direction he had taken.

He again pulled out the pistol and fired some braking shots. His quick motion, which had been commenced by the violent leap from the ship and increased by the first two directional shots, became slower and finally entirely stopped. But there was a long distance to travel back to the *Geryon*, glistering there in the distance, and the cartridge chamber of the pistol was empty.

In excitement he examined the pockets of his rubber suit for ammunition. In vain! There was not a single cartridge to be found. What should he do now?

He drew up his legs and sent them back quickly, as powerfully as he could, hoping that by such swimming motions he could commence to move along. But even if this would have had effect in the interior of the air-filled ship, in empty space his efforts had to remain ineffectual. However hard he tried, the distance to the *Geryon* remained the same.

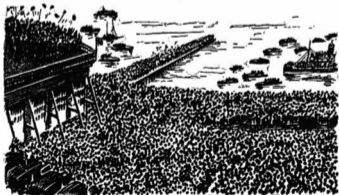
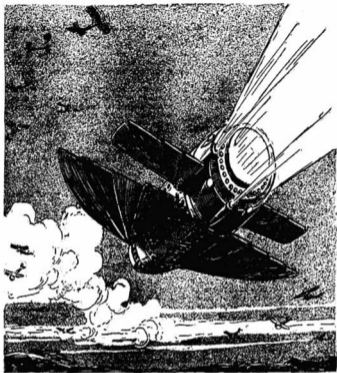
Tired and despairing, he ceased his fruitless exertions. A cold sweat ran down his back. He swooned up and down that on future flights he would be fastened triply and would put on an armor of well-filled cartridge belts. All this, meanwhile, did not alter the fact that the ship's doctor of the *Geryon* was going his way alone in space as an independent celestial body.

Then a gleaming dot came away from the ship. Sam drew a breath of relief. "God be thanked! My adventure has been observed!"

The dot increased in size and soon the inflated balloon-like figure of a member of the crew floated up to him. It took him by the arm and set the weary man in motion again by the recoil of a couple of pistol shots. It was Berger.

A few minutes later the two landed again on the *Geryon* and slipped through the chamber into the interior.

"Well, doctor!" said his savior with a laugh, when



Once more the *Geryes* flew over the shed. Then it went out over the lake. Far out there it turned again to the shore and descended. The water splashed high as the wonderful bird settled down and cut through the foaming waves.

the suits had been taken off. "You want to be independent! Or are you also thinking of fleeing?"

"Has the Russian really gone?" replied Sam in excitement.

"For ever! The orderly just brought me this note, that was fastened to the lamp."

Sam hurriedly seized the paper. It was not sealed, and he therefore thought it proper to read the message, though it was directed to Korf.

"Receipt?" he muttered. "What can Suchinow give us a receipt for?" Then he read on:

"As representative and manager of the Transcosmos Stock Company, of Bucharest, having full authority, I hereby declare that I have received back from August Korf, of Friedrichshafen, the rocket R S I in perfect condition. In the name of the company I express to Mr. Korf my thanks and best wishes for this successful rescue expedition.

"Space ship *Geryon*, February 7.

Suchinow."

"A comical chap, isn't he?" said Berger, as Sam put the letter back in the envelope.

"That man has the devil after him. He cannot bear to return to earth towed by us. He prefers . . ."

He left the sentence unfinished and went to Natalia's cabin.

"I must see about my patient a bit!" he said, when Korf opened the door to his hesitant knocks. "I must see that she is not excited and mistreated."

He was amazed at the brilliance of her eyes and the fresh color that shone on the thin cheeks of the invalid.

"I feel very well, doctor!" said Natalia. "I am going to be so happy on earth, with meadows and woods and animals and flowers. The flowers especially!"

"By the day after tomorrow, dearest," said Korf happily, "we shall be rocking on the waves of Lake Constance. That is to say, if it is not frozen. In our northern hemisphere it is now winter."

"Oh, then we shall go through the snowy pine woods, which glisten in the sun and cast blue shadows on the snow. We shall throw snowballs like children and coast down the valley. And in the evening we shall sit by the crackling stove and breathe the fragrance of roasting chestnuts and watch the apples smoke on the fire. And we shall hold hands. Can you understand, Korf, how infinitely beautiful all the little trifles of the earth seem—after the long weeks and months in space?"

"And the shot into infinity?" said Korf, jestingly.

"It has died away. My task is fulfilled. At last I may and will live!"

Sam thought it time to let the exhausted invalid sleep, and he pushed out his resisting brother-in-law.

"You have fifty years ahead of you, Gus! A few hours right now do not matter. Natalia is still weak and needs rest. Be sensible!"

In saying these words he did not suspect that the few hours did matter, after all.

Suchinow's flight surprised Korf but did not trouble him much. "All right!" he said indifferently. "As he appeared in the *Geryon*, thus he disappears again—unexpectedly and silently. I can sympathize with his wish to save the residue of his fame by making an independent landing."

"Do you think he will succeed in landing with his own power?"

"Why not? The *Geryon* brought him away from the moon, so that the rocket still has the supplies of energy provided for braking purposes. Let us not speak of it any more! Above all, do not mention the affair to Natalia at present! She might worry about her father's fate."

Joyfully the entire company looked forward to the landing maneuvers. The speed of the ship, which had been greatly increased when at the moon, was now so accelerated by the attraction of the earth that already on the next day the brilliantly lighted earth extended in vast expanse below the carrousel. The continents were so sharply contrasted with the darker oceans that one might have thought he saw below him an excellently constructed terrestrial globe.

The *Geryon* steered for the east edge of the earth, in order not to strike the atmosphere opposite to the rotation of the earth. This would have increased the relative speed and accordingly the danger from heat to a very high degree. Korf also wanted to land by daylight and therefore had to descend on the sunny side of the earth.

When the earth was so close that it no longer looked like a celestial body floating in space but rather like ordinary land, over which the *Geryon* was floating at an unimaginable height, Korf no longer left the control room. The most difficult part of the entire trip, the landing, was almost at hand. The radio of the ship was in action.

## CHAPTER XXIV

### On Earth

**A** TUMULT of joy seized the world when the first radio messages from the approaching *Geryon* were received by the great stations and sent all over the world.

Persons totally unacquainted embraced one another enthusiastically on the street. Banners waved from the houses. "Victory! Victory!" was the nation's cry of joy. The last crisis in parliament was forgotten. Party quarrels ceased, and pride shone in every eye, pride for the successful son of German soil.

The buildings of the great newspapers were at all times besieged by curious persons, waiting for the latest news, to spread it over the whole city in a flash. They did not seem to mind the cold, damp winter weather and the dirty slush in the streets.

There was a regular migration of the nations to Friedrichshafen. The little city swarmed once more with sightseers, who were unwilling to miss the sight of the landing of the ship from the sky. Mother Barbara did good business. Her café room was full to overflowing, and she was proud of her fellow citizens who had brought so many guests to her house.

"Yes, we Swabians," she used to say, "we are having a celebration for Korf!" And no one could deny it.

Korf's radiograms had set the landing for February eighth. Very early in the morning the landing place was alive with people. The farmers to whom the adjoining fields belonged were complaining of the crowds that heedlessly walked over the fields, but against the great numbers they could do

nothing. Temporary booths sprang up and refreshed the freezing mob with hot drinks. The bare wintry fields, covered with dirty grey snow, had in a few hours changed to a wild encampment, and the solid ground was being trodden into black sticky mud.

Luckily the fine rain of the past few days, which had been accompanied with snow, had ceased. Now and then a sunbeam even penetrated the moisture-laden clouds and caressed the swarm of people down at the landing place.

In the great semicircle on the shore around the space ship shed, guarded by soldiers, a band took its place. Film operators had set up high airy stands, from which they now and then took pictures of the ever moving masses. An army of reporters, pencil in hand, spent the day freezing.

Toward eleven o'clock appeared the automobiles of the government officials and the guests of honor. A whisper ran through the crowd at the appearance of Director Heyse's car, from which he watched the sky through a majestic telescope.

"We shall have a surprise, your excellency!" he said to the government minister sitting beside him. "The clouds cut off the view, and before we know it, the *Geryon* will break through and be here!"

"I am afraid that these dense clouds will cause trouble for Korf in locating where he is," said the grey-bearded man.

"Hardly!" replied Councillor Heyse. "The taking of bearings by radio is so dependable that the *Geryon* can know its position exactly without seeing the earth. Anyway, Berger is an expert in this. It was he who first used this method of determining direction and location on the flight of the *ZR-3* to America. Since then taking bearings by radio has been greatly improved. Also . . ."

A wild cheer from the crowd swallowed up Heyse's last words. To the southwest a dark spot had come through the clouds and was becoming visibly larger.

The *Geryon* was in sight!

It came nearer and lower in an oblique flight. The mighty wings shone brightly at times, when a sunbeam struck them. The egg-shaped hull could already be plainly recognized.

The cosmic speed had long been used up in the dense atmosphere, and the space ship was manoeuvring in the air like a gigantic flying machine. Then it swept low in a glide. The mighty mass soared close to the heads of the onlookers, so that many anxiously rushed away, and an incurable confusion took place. They could not escape the impression that in the next minute the uncanny structure up in the air would rush down and bury the people under its steel mass.

Once more the *Geryon* flew over the shed, just twenty meters in the air. Then it went out over the lake. Far out there it turned again to the shore and descended easily and surely. The water splashed high as the wonderful bird settled down on the lake and cut through the foaming waves.

The crowd began to move. They swelled down toward the shore, and the police cordon had to struggle hard to keep open the space between the shed and the landing bridge.

The little auxiliary exhausts rattled a few times more. The ship rushed on, became slower in its course, and then lay rocking by the pier, built far

out into the lake. It was a lifeless steel shell, which no one could have thought the monster which a few seconds before had floated freely in the air.

Breathlessly they waited for the appearance of the commander. Heyse's car drove close to the pier, and the occupants got out. A few soldiers quickly ran a gangway to the entrance of the *Geryon*.

At last a man appeared in the dark opening. A deafening cheer came from ten thousand throats to the conqueror of space and drowned out the sounds of the band.

"Hurrah for Korf! Hurrah for the *Geryon*!"

The crowd went wild. The man on the gangway waved his hand in a tired fashion. It was Berger.

Oppressed and slowly, as though a vast weight rested on him, he walked to Heyse, straightened up with difficulty, and announced briefly: "The space ship *Geryon* safely landed!"

"Welcome to you brave men!" cried Heyse heartily, shaking Berger's hand. "But—," he hesitated a second, while an anxious question was in his eyes, "where is Korf?"

Berger was relieved of an answer. A silent procession came slowly over the pier. Dr. Finkle came first, bent and weighed down, like all the rest from on board the *Geryon*. Unused to the earth's gravity, they were bent under the weight of their own bodies and could stand upright only with a great effort.

Then followed the members of the crew, carrying a bier on their shoulders. Behind came Korf, his head bare, pale and distressed.

He did not see the people who had come on his day of glory from all parts of the country. He did not hear the incessant enthusiastic applause. He did not know that all eyes rested proudly on him, the hero they were celebrating this day, who had accomplished what seemed impossible.

Silently he followed the men who were carrying what was dearest to him. There was infinite sorrow in the dull look which he kept fixed on the motionless shrouded figure upon the bier.

"Germany, Germany above all else!" banded from the band, and the crowd continued: "Above all else in the world!" The national anthem of Germany rang out over the bare fields and the crested waves.

Korf's lips moved as though in pain. "Above all else in the world!" he repeated feebly. Then he turned to Heyse.

"I congratulate the German nation for this success!"

That was all that he could say to the people who had awaited him in feverish excitement and were ready to heap him with honors.

The day which was to have been Korf's most sacred day of honor and happiness had become the bitterest of his life. The suddenly returning gravity had pressed the body of Natalka, weakened and unused to weight for many months, with extreme violence upon her bed. The earth itself, which had been the last desire of this much tried mortal, had accomplished what the cosmos had been unable to do. Her heart, which for half a year had defied the most awful death, had ceased to beat a few hours before the landing.

"Above all else in the world!" resounded the song



of the enthusiastic crowd. To Korf it sounded like mockery.

#### The Fate of Suchinow

**W**EEKS had passed. A veritable flood of congratulations came to the victor of the *Geryon*. Countless interviews took place along with countless banquets of celebration. The ceremonial founding of the Korf Space Ship Company crowned the work by Lake Constance, as the final act of what was past and the initial impulse to new deeds.

All the newspapers on earth described the bold flight, showing the "lucky ship" in all sorts of pictures, and connected with it the wildest hopes for the future development of the epoch-making invention. In all civilized countries there was striving to be able to greet the men of the *Geryon* within their frontiers as guests. Korf's name resounded around the earth.

But Korf cared little about the uproar caused by his deed. In restless activity he sought to still the gnawing grief for Natalia. With fiery zeal he worked on the projects of the company. The possibility of travelling in space was now proved. Now it was a matter of using what had been done. He had to utilize the experience gained in the *Geryon* to build new and more efficient space ships and to take possession of the moon and the neighboring planets. His boldest hopes were approaching realization, but there was still a long way before him.

In vain they waited for the landing of Suchinow. The rocket remained unheard of. Certainly the observatories had watched it when the bright spot left the space ship. But that had been the last word from the rocket. The fate of the unlucky Russian remained a riddle. But weeks later light was cast by the news from an overdue whaler, coming back from the south coast of Greenland.

The crew of the ship had been surprised on the eighth of February by a singular phenomenon. Suddenly, though there had not been a breath of air, there was a hissing and roaring in the air, as though a cyclone were coming. Before the terrified crew came to their senses, a mighty waterspout rose to heaven not far from the ship, disappearing equally quickly. When they had passed by the spot, they had been struck by the warm air permeated with clouds of sulphurous smoke. This event was so odd and inexplicable that the captain took exact observations of the locality and put all the details of what he observed in a full report.

When Korf learned of this report, he said quietly, "Suchinow did not think of the atmosphere, which we entered from the side. Probably the torpedo burst open in the atmosphere on account of the one-sided pressure and plunged unguided into the sea."

#### Honor By Forgetting

**S**AM'S practice increased. He had a great rush of real and imaginary invalids, who stared at the ship's doctor of the *Geryon* as at a strange beast, until it got too much for him. He kept curious persons away by charging outrageous prices.

With all possible means he stirred the zeal of his brother-in-law to work. He carefully avoided any reference to Natalia, hoping that time would heal all the scars.

But one day, when he had just come to see Korf,

to invite him to take a walking trip, a great yellow envelope was delivered, directed to Korf in person, bearing the return address of the Magyar Bank.

"What have you to do with this Hungarian bank?" asked Sam casually.

"I am accustomed to letters from persons I do not know," replied Korf indifferently, as he opened the letter. "I have had more mail in the last few weeks than I did in the ten years before!"

But scarcely had he looked at the papers within when his indifferent expression vanished and his heaving breast showed his emotion.

"What is it?" asked Sam eagerly.

Without saying a word, Korf went to his work-room and locked himself in.

Sam walked uneasily up and down. He feared new disturbances of his brother-in-law's mental balance, secured with so much trouble, though he could not imagine how a letter from a bank could trouble Korf in any way.

A half hour passed without Korf's reappearance.

Sam could no longer control his uneasiness, and he desired to be admitted to the engineer's room.

"Excuse me, Uncle Sam!" said the latter as he opened the door. "I totally forgot you were here."

He seemed calm, quiet, and even smiling sorrowfully. Without being asked he passed Sam the letter from the bank. This stated that now, after the death of the rocket-operator Skoryna had been established, the latter's disposition of the insurance money had been opened. The sum of twenty thousand English pounds had been willed to Mr. August Korf of Friedrichshafen. As soon as Mr. Korf furnished proof that Skoryna's death had not been natural but had been due to a mishap in the rocket.

"These people are causing themselves too much trouble!" said Korf impatiently, before Sam had finished reading. "Mr. Vacarescu may be at ease. I shall offer no proof, and he will not have to pay."

Then he folded up a letter which had been enclosed with the letter from the bank, placing it carefully in his breast pocket.

"The last words from someone now 'dead!' he replied to Sam's unspoken question. He sat down by the stove and stared silently into the flames.

"Gus!" Sam put his hand on the engineer's shoulder. "Leave the dead in peace! It was to be! And . . ." he hesitated a moment, "and it was best so!"

"Yes, it was best so!" he repeated, as Korf looked up questioningly. "Are you going to grieve for a person who died in the moment of greatest happiness? Look, Gus, you no longer belong to yourself or to her. You belong to mankind, and the world has a claim upon you. The man must be free and unchained by any ties, who is called upon to conquer the realm of planets. You will and must complete your task, for the sake of mankind and of Natalia. You are mistaking the will of this great woman, if you eat out your heart in mourning for her. Thank her by your deeds, and honor her by forgetting her!"

Korf raised his head. "You are right, Uncle Sam!" he said slowly. "To be alone and solitary is the lot of him to whom the vibrations of the universe are familiar and the currents of a great soul are unknown. I will forget Natalia for the second time, that her work may live on!"