The Aztec Mystery

A Thrilling Story of the Old West

BY MURRAY LEINSTER

SYNOPSIS.

Sonny Holman, believing he is the rightful owner of the Aztec mine, holds up the payrolls. Janet Laurier holds legal title to the Aztec, and is kidnapped by Garcia's gang. Sonny rescues her. Garcia's men run off some cattle and Sonny, riding in pursuit, is captured by some of Janet's mine guards. He escapes, but his horse is shot. Janet has the horse doctored and pleads with Sonny to leave the country. Janet and Sonny are pursued by Garcia's men. They take refuge in a cave that Sonny uses as hiding place.

CHAPTER XX.

Sonny struck a match and lit a candle, a thick squat miner's candle. Its dancing flame steadied and threw a curious carmine glow about the interior of the strangely formed cave. Instinctively, Janet's eyes flickered to the two crumpled figures she had noted before. But Sonny had thrown a tarpaulin over them.

He was facing her, smiling strangely. Gunpowder and the other horse stirred uneasily in the inmost recesses of the cavern.

"Look here, ma'am," he drawled. "Yuh put up a reward for me, to sell every Mexican an' lowdown white man huntin' me. I got yuh out o' Garcia's han's an' yuh tried t' take me to jail. Yuh tried t' trap me up at Little Canyon. Today yuh tried t' use the love my hawss has got for me to lead your posse of hired killers to where I was—knowin' they'd no more dream of takin' me to Moleville alive than they'd dream of flyin'. An' now, without me plannin' it all, yuh're holed up here with me. You're kinda badger, ma'am, against me, an' I might get wiped out by Garcia's gang even yet on account o' you. Now, ma'am, why should I be considerin' you any longer?"

Janet stared at him. He was gazing at her with the same curious smile on his face. "Why sh'd I be a good outlaw any longer, ma'am?" he asked somberly. "Why shouldn't I act like the critter y' take me for? I c'd end this business once for all. I c'd make yuh turn over the Aztec t' me."

"You couldn't," she told him steadily.

"You're forgettin', ma'am—"

"I'm not forgetting anything!" she cried fiercely. "I am helpless, yes! You can do anything you please with me! But you can't make me turn over the Aztec! You can't make me marry you! You can't make me stop fighting you! Do you think I wouldn't have stopped before now if I could? Do you think I don't—oh!" She stopped, and her waxen pallor was replaced by a flush that stained her cheeks and throat a vivid crimson.

"Go on, ma'am," drawled Sonny. It was he who was pale now.

"Do you think," she asked more steadily, "that I don't love you?"

Sonny stood rigid for an instant. "Why, I got to kinda admit, ma'am," said Sony unevenly, "that I did have some such idea in my mind."

He moved toward her, gazing down into her face with eyes that were bewildered and unbelieving. She met his gaze bravely. He stirred, and suddenly she was in his arms with her head against his shoulder, sobbing as if her heart would break.

"Lordy! Lordy!" murmured Sonny bewilderedly, patting her shoulder helplessly. "Please don't cry, ma'am, please don't cry!"

She continued to weep until terror struck him. He lifted her face in alarm and her arms tightened convulsively about his neck. Her lips were lifted to his and he kissed her.

"But I won't stop fighting you," she sobbed. "I'm going to win! And I can't marry you! I'm going to make you leave the mine alone even if I have to send you to prison! And—and if I do that I'll die—"

Sony straightened up and laughed. "Lordy, Lordy!" He touched her cheek gingerly. "An' yuh expect me to turn yuh loose to do all them desperate deeds? Not this hombre! Ma'am, I got yuh fast an' I ain't goin' t' let yuh loose again until we' made a more permanent declaration o' war before a preacher!"

"I can't marry you! I can't!" she cried desperately.

"Shucks," said Sonny calmly. He kissed her. "Yuh forget a lot o' things. One of 'em is that I'm a moral, horrific person, a fire-eatin', abductin', mayhem committin' outlaw. For instance, I'm goin' t' kiss you again, an' then I'm goin' t' take you outer my own private back door that Garcia's hombres don't know about, to a place where nobody's ever find yuh for a million years, an' then I'll——"

Then was a sudden, overwhelming explosion. The heavy bulkhead Sonny had lowered before the cavern opening was rent and splintered. It heaved up in fragments and collapsed to the floor. A blast of air extinguished the candle and utter blackness fell, while the penetrating smell of exploded dynamite swept through the cavern.

Then came the whisper of voices outside. Sonny had vanished with a sickening suddenness. Suddenly, a little glow of light dropped from above into the cavern door. It was a flaming mass of yucca, and it burned yellowly, sending searching, flickering beams of light into the furthermost recesses of the cavern.

A pause, while unseen eyes searched from window. A still figure on the floor was plainly visible. Sibilant, excited whispers came within. Presently a face showed outside. A pause, and then a figure. Then a man came boldly into the opening. He gazed in, grinning, and called over his shoulder briefly.

Two other men materialized and came eagerly forward. The first man pointed to the crumpled figure on the floor, half covered with debris and fragments of the door. He spoke triumphantly in Spanish. The three laughed. Then the foremost grinned at Janet, standing statuelike in the cave, her hand to her breast, transfixed with horror.

"El senor Garcia," grinned the man, "t'e weel not be back untee tomorrow, Senorita, but 'e would not weesh you to be lonesome. So seence Sonnee 'Olman ees dead, we weel try to comfort you!"

The others grinned evilly with him. They crowded inside the door, while Janet was unable to move.

And then Sonny's voice came once more, racked with pain and hardly more than a whisper, but deadly with determination though wavering in weakness. "I'm givin' you hombres thirty secon's to pray in. If yuh drop yuh guns I might make it a coupla minutes. Janet, get some rope an' tie 'em up before yuh try t' get me out from under this door. Drop yuh guns, hombres! Drop 'em quick, before I blow yuh t' hell!"

Dawn came to a still and breathless world. The east paled, and a thousand hills rose ghostlike out of darkness. Rose tints appeared, then pink, then gold, and the hilltops shone faintly, while mist curled sleepily in a thousand purple valleys, still shadowed and in darkness. Somewhere a snow-fed stream trickled lazily over a rocky ledge, and the sound of its trickling carried far in the stillness of the dawn. Somewhere, horses stirred and stamped among loose rocks, and the clattering they made re-echoed among a million cliffs and precipices.

Fires sent up smoke from at least three places in the hills. One was a single campfire, a bivouac of a half dozen men. A number of cowed and uneasy dogs were leashed nearby. The men arose and stamped stiffly by the blaze to warm themselves after the chill of the mountain night. They prepared no food. One or two bit off huge chunks of chewing tobacco and worked their jaws comfortingly. The others lit cigarets and smoked unsatisfied.

A little man with faded and expressionless eyes regarded the dogs without emotion. "They'll trail now," he said tonelessly. "W' ought t'e've had better sense than to feed 'em like Tilford said. They'll trail now."

A man with a scarred face growled. "Tilford's a fool. We shoulda brought along somethin' t' eat."

"His mistake," said the man with the faded eyes. "He'll pay for it. An' we git paid for Holman. Then we start on the easy money."

Stiffly and still growling, the six began to saddle up. The dogs shrank back when the scarred faced man drew near them. Presently they followed unhappily, dragging behind the horses, when the six rode away holding fast to their leashes.

Elsewhere in those hills another camp awoke. There were fires, four or five huge blazes, to which a much greater number of men crowded for warmth. Nights in the hills are always cold, no matter what the temperature at midday. And a few hours of enforced rest without blankets will stiffen any man's muscles.

"Gosh," yawned a puncher. "I'd give a ten-dollar bill for a cup of coffee; I'm cold right down to my gizzard.

Thompson came by his face grim and set. Tilford was not far from his side, with something furtive in his gait.

"Get saddled up, boys," ordered Thompson curtly. "We're going to give Tilford another chance. He won't be leaving us, anyhow. But if he pulled us out here on a fool's errand so something could be put over while we were gone—well, he'll hear from us."

"I'm not an outdoor man," protested Tilford uneasily. "I couldn't find the place in the dark. The Mexican told me, but maybe I got my bearings mixed up."

"You'd better find them again," said Thompson coldly. "If anything's happened to Miss Laurier—and I don't doubt it for an instant—you'll pay for it, my friend."

(To be continued.)

GOLD Syndicate

TREMENDOUS development now going on throughout Northern Ontario presages a gold boom of magnitude. New camps are opening up rapidly. New mines are in the making. Fortunes await those who get into the leaders in these new areas early.

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Higher Education

By L. P. Jacks in "The Education of the Whole Man"

Not long ago I paid a visit to a great factory where hundreds of young women are employed. I remarked on their ease and dexterity and cheerfulness. "We have a school of physical culture attached to the mill," said the manager, "and we teach them to walk in our evening classes. The interesting thing is," he added, "that when we have taught them to walk and to carry themselves easily they begin asking for other things. Some want to sing, some want to dance and some want books, and three of them have been writing poetry. I expect we shall end up by becoming a little university."

Our vision of education as an episodic process conducted by professional drudges, whose dull humming goes on inside the walls of a school or a college should be expanded into the idea of it as a great romance, the summary adventure of our age, the central concern of every citizen, lifelong in its duration, universal in its scope, addressed throughout to the making of whole men, and having nothing less for its object than to convert the stuff of knowledge into human skill, and bring it to bear on the pursuit of excellence in every department of social activity.

My own education was sadly defective as an education of the "whole man." It was divided into what are called "subjects"—just uncorrelated chapters of knowledge, parcels of book-say and hear-say, tied up with string, and pitched into our mind as into a basket. There was one set of operators who trained our minds in the class-rooms, and another set who trained our bodies in the gymnasium. And there was a third gentleman, called "the chaplain," who was supposed to train our characters and look after our souls. But there was no unity of aim. The mind department, the body department, the character department, the soul department were all in different compartments, and they were consistently lost sight of—the whole boy, who is mind, body, character and soul all in one.

At a meeting called to protect our beautiful countryside from the invasion of ugliness now threatening it—factories, jerry-building, hideous advertisements and such-like—I heard a speaker make a profound remark. "You will never keep your beautiful England," he said, "until you get a beautiful people to live in it." By "a beautiful people" he meant simply a people whose bodies had been liberally educated to correspond with a liberal education of the mind, and to support it at every point the eye trained to see beauty and to value it, the ear trained to hear harmony and to resent discord, the hand trained to fine craftsmanship, the whole man, mind and body together, to creative activity.

It is vanity to attempt to graft an AI culture of the mind on a C3 culture of the body, or, as a foreign critic once expressed it, "to train the minds of the young men in your lecture-rooms as though you meant them to become clergymen and to train their bodies in the football field as though you meant to become policemen." The coeducation of mind and body would recognize that perfect health is not to be defined alone in terms of sound sleep, good digestion, muscular strength and animal spirits, but demands in addition an organization, an economy, a self-control not to be attained without careful training, and beyond all that, the development of the finer aptitudes for self-expression in creative forms. The human body is naturally skill-hungry, and until that hunger is satisfied it will be ill at ease, craving for something it has not got and seeking its satisfactions in external excitements which excitements which exhaust its vitality and diminish its capacity for joy. Short of skill, the perfect health even of the body is impossible.

Forms of physical culture are already in practice which train the whole body as an instrument of self-expression and self-control, teaching it the harmony and dignity of normal movement, both simply and in concerted operations of great beauty, and making all this fundamental to higher activities, a growing point for many arts. At all points control is ranked above effort, and the normal performance above the exceptional feat, to walk with the minimum fatigue being held more important than to run with the maximum speed, to speak the mother tongue with easy articulation than to utter a shout that can be heard a mile off, to breathe naturally than to hold one's breath for ten minutes under water. Strength of course is aimed at, but a strength that shows itself in economy rather than expense, in balance than in strain, in versatility than in violence—a different thing from the strength needed for a boat race or a prize fight. In every human being there is a latent passion for excellence, and the primary object of education should be to awaken and foster this passion, and let it loose to do its work in every department of labor and of leisure.

All of us might enjoy our leisure far more if we had been better educated, if we could import into our leisure occupations generally something of that passion for excellence which is so necessary in other connections. The pleasures that I have enjoyed most are not those that I bought ready-made, but those that I made for myself by exercising the very modest amount of skill I happen to possess. I believe that all men and women are made that way. No one ought to be considered educated, whether boy or girl, man or woman, until he or she has acquired at least the elements of some sort of skill. There is no better protection against folly and vice. There is no surer road to the real enjoyment of leisure.

A sound physical culture should be made accessible, along with mental culture, to all classes of the community; it should form an integral part of our national system, and be as "compulsory" as anything else. I am convinced that we have, in the bedraggled physique of the town-bred population, one of the chief reasons why popular education has failed to produce the effects expected of it.

There is such a thing as the higher education of the body, as well as the higher education of the mind. It is something quite different from what athletics aim at and goes much farther than any of the matters which hygiene is concerned with. It regards the human body as a whole as capabl eof being developed into an instrument of the highest skill. Nevertheless, they do their best to get below a certain weight.

It is the plump girl who gets the admiration from the corset. The thin girl is passed by unnoticed. The Canadian girl nibbling cream puffs and sipping orangeades in fashion decreed that she must not and the West African maiden until it is unsafe to swallow another mouthful, because she is expected to be fat, are both slaves of fashion, so "sisters under their skin."

Parasites and Manure

Manure is the greatest source of danger from the eggs and young parasites worms. It is also the best area for the numerous fly pests injurious to domestic animals. The practice of permitting manure to cumulate about stables and pastures one day longer than need be should be avoided, as it increases the possibility of animals becoming infected with the common animal pests. It is hard to get away from the old habit of carelessly throwing manure out to the yard and leaving it there months. How much more sanitary would be for the animals if all manure were removed and placed in protected pile or pit. Such procedure would reduce the parasite and fly loss, that is generally present. A recent survey covering some 10 000 the examination of the feces from sheep showed every flock was infested with a number of parasites. The parasite eggs were found in manure in every case. Keep our animals away from their own droppings practice pays a good return in health.

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Cuba Has 100,018 Cows

Havana.—The first enumeration of milch cows in Cuba has just been completed. The Bureau of Milk Inspection of the Department of Health reports that there are 100,018 of the animals on the island, producing 320,722 liters of milk daily.

The growth of the daily industry in Cuba can be appreciated when it is recalled that some ten years ago fresh milk was a luxury which only the well-to-do were able to afford, practically all milk consumed being imported. Even five years ago milk sold at 30 cents a liter, due to the shortage of domestic production.

At present 4,290 dairy farms furnish employment to 10,137 persons, according to the report. The provinces of Havana and Oriente lead in milk production, the former producing 126,559 and the latter 78,005 liters.

Statistics just published show that the importation of condensed milk during the first three months of 1930 amounted to 3,631,177 pounds and dropped to 256,493 pounds in the corresponding period of 1932. Increased import duties on evaporated and condensed milk, which have been approved by the Senate and are now waiting action of the lower house, will cause a further drop in importations, since at the higher rate imposed the price will be prohibitive.

"So Kate and Alice are not on speaking terms."

"No; but they more than make up for it by what they say about each other."

In there one being, stubborn as the rock to misfortune, whom kindness does not affect?

Where Fat is Fashionable

Slimness is a thing of beauty in Canadian girl. But the women of West Africa must be fat if they are to attract. The stouter the mammy becomes the more fashionable is her figure.

Consequently, her meals are what prolonged affairs. They must consist of yams, ground into a paste which is called "fou-fou" and bananas. And to assist the process of putting on weight, she takes no exercise as possible.

There is a certain tribe in Nigeria where girls about to be married, who wish to appear at their best, are sent to what is called "the fattening house."

Here they are fed at short intervals on all sorts of luxuries—chicken, soups, and so on. They stay in the place for several weeks, stuffing all they are worth, and taking care to move as little as possible.

When the happy bridegroom comes to claim his bride at the end of the fattening process he finds her so enormously fat that she is unable to rise from her seat. He is a very proud man as he makes arrangements for this huge mountain of flesh to be carried to his home.

Once the dusky belles are married and resume their normal life they soon of this unnatural fashion. Nevertheless, they do their best to get below a certain weight.

Too Many and Not Enough

(Written on a Boston and Albany Local.)

There are too many people in the world . . .

Too many children whose ears need scrubbing,

Too many drummers whose jokes need snubbing,

Too many girls who touch up their lips,

Too many porters gaping for tips,

Too many fat men lolling and snoring,

Too many old men, piteous and boring,

Too many women with Main Street chins (A mouth leaves off where a neck begins)—

There are too many people in the world.

But there aren't enough in all of the world . . .

Not enough thoroughbred colts all prancing,

Not enough puppydogs dinky and dancing,

Not enough woodchucks dozing and dreaming,

Not enough daffodils glimmering and gleaming,

Not enough birches, or brooks, or wings,

Not enough sunrises, not enough springs,

Not enough time, between living and dying

To set our minds on one swallow's flying,

Not enough time to dip our free

Cupful of beauty from sky and sea—

No, not enough in all of the world!

—Atlantic Monthly.

Berlin Mail Tube Refrigerated

Berlin.—A refrigeration system has been installed in part of the 274 kilometers of the subterranean air tubes by which the Berlin postoffice facilitates its special delivery service.

The refrigeration was necessary to prevent overheating by friction in the tube from the main postoffice to Tempelhof Airport, a stretch of about six kilometers which the carriers make in ten minutes under a high-pressure system. The subway trains require seventeen minutes for this stretch.

Revenge

Revenge is ever a hypocrite, rage at least strikes with the naked sword; but revenge, stealthy and patient, conceals the weapon of the assassin.

Sunday School Lesson

Lesson VIII—The Tent of Meeting—Exodus 33. 7-16. Golden Text—The Lord spake unto Moses face to face, as a man speaketh unto his friend—Exodus 33: 11.

ANALYSIS.

THE TENT OF MEETING, vs. 7-11.

THE PRAYER OF MOSES, vs. 12, 13, 15, 16.

THE PROMISE OF GOD, v. 14.

THE TENT OF MEETING, vs. 7-11.

It should be remembered that the Israelites were leading a roving life in the desert. If they were to have a sanctuary where they could worship it must necessarily be a portable one which could be easily transferred from one place to another. They themselves were living in tents. So he made a specially beautiful tent, a tabernacle, to be a place for worshiping God. It was called the Tent of Meeting. It was a place where the Israelites could meet not merely with God but, above all, with God. There they would come with their perplexities and refer them in prayer to God. Further, he Tent of Meeting was set outside the camp of Israel, a separation between the holy tent and the common camp suggested to all that however near God comes his people, he yet remains distinct, holy and holy, v. 7. When Moses, the leader, went out to the holy tent, all the people of Israel ceased from all their occupations, stood at their tent-doors and watched him going on his mission. Then, as they thought, the great transactions which were to take place between God and Moses in the Tent of Meeting, the spirit of reverence came upon them, and they bent down in solemn obeisance at their tent-doors, vs. 8, 10. When Moses came to the tent, God also came. His coming was marked by an unusual appearance. The pillar of cloud by which the Israelites were led during the day descended from the sky, hovered above the tent and settled before the door. In this way the tent was completely hidden from the view of the Israelites in the camp. In the Old Testament the appearance of God was frequently accompanied with strange signs in nature. Sometimes he showed himself in a blazing light. This suggested that nature could be revealed to men. At other times, as here, he came with clouds of darkness. This suggested that God's being, the depths of the depths of the Godhead beyond man's comprehending, vs. 9, 10. In this way God was wont to converse with Moses intimately, as on the basis of friendship. In treating Moses thus, God was not showing favoritism. He was in communion only with those who have the spiritual capacity and inclination for such exalted converse. In these periods of fellowship with God, Moses would return to his camp, God's message to Israel, but Joshua, who was being trained as Moses' successor, remained permanently in charge of the tent, v. 11.

THE PRAYER OF MOSES, vs. 12, 13, 15, 16.

On one occasion Moses made bold to offer a complaint to God. Many a saint of the Old Testament had the boldness with God. It should be noted, however, that they made the complaint to God himself, and not to others. So Moses took his complaint to God in prayer. He complained that he was given the responsibility of leading the Israelites, yet he himself was in need of divine guidance, had not yet fulfilled which God had promised angels was to guide them, cf. 32: 34 and 33: 2. It was the ground of his intimacy with God that Moses could utter this complaint. For God had at one time assured him that he knew Moses' name, that is, he knew Moses intimately as an individual, or, as Driver says, "Like a king who knows the names of only one of his servants as he is on intimate terms with," v. 12. The prayer of Moses now became more wonderful. It rose more spiritual in its aim. He pleaded for a knowledge of God's ways of dealing with men. From a knowledge of God's ways he could go to a knowledge of God's inward nature. This knowledge of God was necessary if he were to lead God's people wisely, v. 13. Moses became fervent in his prayer. He declared that if God were not to go perfectly with his people they would prefer to remain where they were, in the neighborhood of God by Mount Sinai, v. 15. Finally, he prayed for a fuller assurance that Israel had God's acceptance with God. The one assurance, utterly satisfying, would be God's personal presence with them on the way. This would be a plain mark that Israel was distinguished from all other nations of the earth, v. 16.

III. THE PROMISE OF GOD, v. 14.

The prayer of Moses reads, in part, like a dialogue between God and Moses. So God interrupted Moses' prayer to assure him that he would go in person with the people of Israel, and that at the end of their desert wanderings he would give them rest in the assured possession . . . the land of Canaan.

Tracking Criminals With Plaster Casts

Frequently found at the scene of a crime are many bits of evidence, such as footprints, tire-prints, tool-marks, teeth-prints, wheel-tracks, and numerous other material clues.

All of these are perishable, and yet this very evidence will serve to identify the criminal in court, says Mr. . J. Kaempfer, in Hygea (Chicago). We read:

The use of casts and molds has been of value in various fields of science to preserve in natural shape and size an object of importance. This process which at the present time is called "moulage" is extremely valuable in criminal investigation. Teeth-marks in an apple can be just as identifying as finger-prints.

If a door has been jimmied in the course of breaking into a building, there will remain along its edges markings produced by the tool employed. Casts of these marks can be made and compared with the suspected tool to determine its identity. Heretofore it was necessary either to saw out the part of the door involved or to remove the entire door for court demonstration. Alphonse Poller, an Austrian, is the creator of this method. His untimely death in 1930 constituted a terrific loss to the world of science.

Gems From Dickens

Recollect! Control yourself, always control yourself!

* * * *

You cheer me up! I'll cheer up you! We'll be as gay as larks . . . and we'll fly as high.

* * * *

It ain't many that comes into a poor place, that deems it worth their while to move their hats. . . but people thinks more of it than people think.

* * * *

That's what I call a self-evident proposition, as the dog's meat man said, when the housemaid told him he warn't a gentleman.

* * * *

I'm easy pleased; it is but little that I wants; but I must have that little of the best, and to the minute as the clock strikes.

* * * *

I remember thinking once, in the days of my childhood, that pickled onions grew on trees, and that every elephant was born with an impregnable castle on his back.

* * * *

I think an inn is a good sort of a place to propose to a single woman in. She is more likely to feel the loneliness of her situation in travelling, perhaps, than she would be at home.

* * * *

I always protest against being referred to the bees . . . are human labourers to have no holidays, because of the bees? And am I never to have change of air, because the bees don't?

* * * *

Nothing will so quickly refine and ennoble the character of the child as the spirit of kindness, justice and compassion awakened toward helpless animal life. Experience has demonstrated this a thousand times.—Dr. Rowley.

* * * *

There are moments, and sometimes even hours, of which we can say that it was worth being born into the world in order to enjoy them. Such, for instance, is the peaceful and happy contemplation of a lovely and repose-ful piece of nature scenery, with the rich foliage of summer around, a shining meadows, and the all-embracing vaulted blue of the sky above.—Arthur Easten.

Berlin to New York in Twelve Hours

By HEINRICH KLUTH, in Die Woche, Berlin.

Four years ago one of the pioneers of rocket research, Max Valier, predicted that before long the enormous distances between the continents would be covered in a few hours with the rocket, the theoretic foundations of which were already laid at that time, while practical experiments had just begun. Valier believed that the six-hour mail service by rocket between Europe and America would become the slogan of the future.

Valier is dead, martyr of his idea. The experience of a rocket flight was denied to him by fate. But today thousands of research workers and practical engineers the world over study the problem of flying in the stratosphere with the same tenacity that knows no obstacles, the same hope and unabated optimism. The rocket is more alive than ever and is much nearer its realization than Valier imagined.

Just now, however, the ambitions of the rocket adepts are surpassed by the stratosphere plane. During the last few years much attention has been given to the stratosphere. Taking as a point of departure reliable meteorological calculations, scientists have reached the conclusion that far greater speeds than those of ordinary flying could be obtained in the stratosphere. In the experimental laboratories of universities and industrial plants the scientific principles of the stratosphere plane were worked out and tested. Thousands of motor builders now work on models suitable for great altitudes, trying to adapt the dimensions to the new task and increased demands of the rarefied atmosphere.

A preliminary solution of the problem appears to be contained in Dr. Ammon Hansen's graduation thesis, "Development Possibilities of the Stratosphere Motor." Hansen combines scientific knowledge with rich practical experience, acquired as a squadron leader on the front during the world war. His ideas have created a sensation and have so strongly impressed several of the leading German constructors that it was decided to place with the Junker works an order for an experimental plane built according to Hansen's principles.

Rumors that the construction of a new rocket plane was under way have been afloat for some time, although the secret was jealously guarded by the constructors. The new machine is not a rocket plane, however. Its builders do not strive to set up new speed and height records, the purpose being to use the plane for experimental purposes and scientific research. It is the first stage in the evolution of the stratosphere plane, which will be able to fly "above the weather." For the latest ascensions into the stratosphere have established beyond doubt that above the so-called stratosphere the atmosphere is constantly calm, and that there are no clouds and no disturbing atmospheric perturbations and winds, so that the usual risks connected with atmospheric conditions would be entirely eliminated in flying at great altitudes. It would permit constant and perfect navigation, day and night, sky and horizon being visible all the time, because of the scarce dispersion of light. Stars are visible in the stratosphere in daytime, which would permit a constant and crorect astronomic orientation and would make flying independent of the signaling organization maintained on land. Perhaps the day is not far away when passengers of the stratosphere service Europe to America, who feel time hanging on their hands, will spend the few hours of crossing in getting familiar with the position of the fixed stars. The serious drawback of the motor being blocked by ice would also be eliminated in the stratosphere, inasmuch as it contains no humidity.

The flier in the stratosphere, however, will have to face surprises and difficulties unknown in ordinary flying. Altitudes of ten to twelve miles mean extremely low temperatures, sometimes as low as 90 degrees or even lower. The air is so rare that its density does not amount to even one-tenth of the normal. These difficulties may be overcome, as was proved by Piccard, whose balloon, equipped with airtight cabin, ascended ten miles above the earth. Already, before Piccard's experiment took place, certain constructors conceived the idea of equipping the stratosphere plane with an airtight and pressure-existing altitude chamber. The difficulties to be overcome by the stratosphere plane are of course far greater than those encountered by Piccard, for whom one outward grip was sufficient to pull the valve cord and make the balloon descend. In a plane the motor must be operated from inside the air tight cabin, and at the same time all requirements set up by Piccard for heating, airing, visibility, instrumentation, etc., must be complied with.

The altitude chamber built into the experimental stratosphere plane is absolutely airtight and gastight on all sides. There is room for two men only. It has double, gastight walls, with curred surfaces, secured against pressure above atmospheric from inside. The shape of the cabin is fitted to that of the human body, in order to insure perfect visibility. The window panes are double and protected against moisture from inside and ice from outside. The space between the window panes, which is isolated from the intervening space between the cabin walls, can be heated. To reduce the heat requirements of the cabin, the space between the walls is filled with a special gas, which is a very poor conductor of heat, and is maintained under a constant medium pressure, regulated by means of a special device. The steering levers are more or less the same used in ordinary planes, but the pilot is called upon to keep a watchful eye on a great number of scientific instruments, which are mounted on a board of the width of the whole cabin.

It was important to invent a method whereby the pilot would be able to look down on the earth, which is necessary for the determination of the direction when flying at such altitudes. After numerous experiments, it was decided to fix a special telescope between steering levers and pilot seat, so that it rests between the legs of the pilot.

Externally, the stratosphere plane is not very much different from other airplanes, but it is, of course, much larger than the ordinary single-motor machine. The span across the wings is 92 feet, and the length is 52½ feet. The carriage is unusually high, because it must support a propeller of twenty feet in diameter.

For the experimental flights the plane is equipped with an 850-h.p. Junker motor, operating a multiplistage compressor. This compressor feeds to the motor a constant supply of air of a constant tension, thus eliminating the inconveniences of the rarefied atmosphere. The compression in the cylinders is just sufficient to insure a constant motor capacity in the stratosphere.

Although this plane represents the first practical step on the way toward the solution of the stratosphere problem, inasmuch as it will permit carrying out experiments on a large scale, it is far from being the ideal solution. Its importance lies, above all, in the possibility of testing such features as the compressor and the airtight cabin, without which flying in the stratosphere is absolutely impossible.

It will take some time before a suitable model for mail and passenger service is constructed. It is probable that the service will be limited to the transportation of urgent mail and valuables in the beginning. This would make it possible to acquire the experience without which the security of passengers could not be safeguarded.—Magazine Digest.

Move For the Better

Reporter (of small town paper)—"Your political rival is advertising the sale of his house—he's moving to the city." Editor—"Have it placed under 'Civic Improvements'."

The possession of wealth makes one doubly lonely when one has lost those who might have shared it.

What New York Is Wearing

Illustrated Dressmaking Lesson Furnished With Every Pattern

A youthful model that is quite puffed up about its sleeves, uses plain crepe for contrast.

The original model was in a red and white crepe silk print with plain white.

Another darling scheme is flag blue and white crepe silk print with the yokes of self-fabric and the sleeves of plain white crepe.

Style No. 2957 is designed for sizes 14, 16, 18, 20 years, 36, 38 and 40 inches bust. Size 16 requires 2¾ yards of 39-inch material with 1⅛ yards of 35-inch contrasting.

Batiste prints, voile prints, sheer linen prints, triple sheer and pastel tub silks also smart.

Size 16 requires 2⅝ yards 39-inch, with 1⅛ yards 35-inch contrasting.

HOW TO ORDER PATTERNS.

Write your name and address plainly, giving number and size of such patterns as you want. Enclose 20c in stamps or coin (coin preferred; wrap it carefully) for each number, and address your order to Wilson Pattern Service, 73 West Adelaide St., Toronto.

Irish Expert on Flax Studies Canadian Markets

Ottawa.—Continuing his survey of the flax-growing situation in Canada, Lewis Gray of the Northern Ireland delegation to the Imperial Conference, is now visiting Western Ontario. Mr. Gray has already been in contact with that section of the Dominion Experimental Farms Branch which deals with flax, and he is accompanied on his trip by R. J. Hutchinson, director of the fibre plants department.

Mr. Gray is observing Canadian methods in the pulling of flax, and arrangements have been made for him to deliver an address at Forest, Ont., to the flax-growers of that district.

Some time ago Mr. Gray declared that practically all of the flax used by the linen manufacturers of Northern Ireland was produced in Russia. These industrialists, however, were quite prepared to transfer this business to Canada, provided that sufficient volume and suitable quality of flax was assured from this country.

Sacrifice

Love will pick the lock. Affection will sacrifice itself to bar the door with its own arm. Witness: Mother's affection.

Love

Friendship often ends in Love; but Love, in Friendship—never.—Cotton.

Sowing Wheat

And now the sun bore down on the prairie the whole livelong day. Bright and quivering in the forenoon, he swam through endless seas of blue; across the hazy afternoon he beamed caressingly; toward evening he opened wide his countenance; then the flood of light grew refulgent, only to die in splendour against a mysterious night which also had life.

As the fine weather continued, Per Hansa became more restless, but it only seemed to fill him with greater joy. Suddenly he would be up by the field. Wasn't it dry enough yet? . . . He ought to have had the seeding all done by now; it was high time to begin breaking new ground.

On the 14th of April, the Sommermaalsdag of his old fatherland, Per Hansa began seeding the wheat. Three times that forenoon he had been out to test the ground; the last time he made his great decision: Now we will start!

No sooner had he finished the noon meal than he rushed out, grabbed the seed bag that he had made for this occasion, and carried two sacks of seed up to that portion of the field where the ground was driest. He had paced off the whole field into one-acre lots, and marked each plot. . . .

Again he plunged his hand into the bag and his fingers closed on the grain. He felt profoundly that the greatest moment of his life had come. Now he was about to sow wheat on his own soil. His hand tightened in the bag; he was on the point of lifting it out, when something queer happened—the kernels were running out between his fingers! He gave another grab, closing his hand still tighter; again the yellow kernels slipped through his fingers like squirming eels. Then Per Hansa threw back his head and laughed. These fellows aren't very anxious to go into the ground after riches for me! . . .

And now the wheat rained down in yellow semicircles from Per Hansa's hand; as the seed fell, the warm rays of the sun struck full across it, and seemed to wrap it in golden light.—O. E. Rolvaag, in "Giants in the Earth."

Twelve Hours to New York

If the claims of a German inventor can be substantiated, it may be possible before long to fly from London to New York across 3,000 miles of the Atlantic in about twelve hours. The new Junkers plane, upon which engineers have been at work for more than two years, is designed to have a speed of between 300 and 400 miles an hour when six miles above the surface of the earth.

One great problem facing aircraft designers is that the air grows rapidly rarer and thinner for every hundred feet above the surface. In a rare atmosphere it is difficult to obtain high speeds since the propeller has so little grip. That is why in the Schneider Trophy races pilots always fly low.

So confident are the Germans that they have solved this and other problems of great speed at high altitudes that Captain Hamm has already gone to the Berlin works to prepare for a flight from Berlin to New York, which he hopes to accomplish in a little more than twelve hours. At heights such as six miles the air is too rare to support life, and the pilot sits in a hermetically-sealed compartment supplied with oxygen. So great, too, is the cold that his clothes and even the knobs and levers of the machine are warmed by electricity.

OLD FRIENDS

Old friends are the greatest blessing of one's later years. Half a word conveys one's meaning. They have a memory of the same events, and have the same mode of thinking. I have young relations that may grow upon me, for my nature is affectionate, but can they grow old friends! —Walpole.

Bargain

It is not sharp practice and smart bargaining that tell. On the contrary, there is no occupation in which not only fair, but liberal dealing brings greater reward. The best bargain is that good for both parties.

MUTT AND JEFF— By BUD FISHER

The End of a Beautiful Friendship.