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Diaz, the Great Man of Mexico.

Visiting President's Career More Wonderful Than That of Any Hero of Fiction—Backwoods Beginning—Law, Religion, Fighting, Politics, Statesmanship — Brave Soldier and Heaven Inspired Organizer—First Emancipator of Woman In Spanish-blooded People.

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This character sketch of President Diaz becomes especially interesting in view of his recent intention to visit this country. The illness of Senora Diaz, whom Mr. Lummis refers to as the idol of the Mexican people, to whom she is affectionately known as "Carmelita," prevented President Diaz from carrying out his plan and necessitated the sending of representatives instead of a personal visit.

The arithmetic has such an overwhelming majority in its following that it would doubtless be awkwise to question it. Yet one may sometimes be pardoned for a silent incredulity. 1520 from 1822 seems, according to the best text books at my command, to "leave" 69; and I do not believe any man will see Porfirio Diaz without running over the figures again and make sure there is no mistake. It seems incredible that this fateful figure should be on the verge of three score and ten. Yet he was born in 1830—appropriately enough on the eve of the birthday of Mexican independence (Sept. 16)—and this is generally taken to be 1830.

A man of 15 with speech as compelling, capilaries as free, eyes as eagle-clear, is envied; and I have never known a man of any age whose step was younger.

The expectation that this undimmed veteran—the greatest soldier and the greatest statesman that Spanish-America has ever produced, and one of the large names in both rosters for all history—is to revisit the United States (he was here in 1883), on a supplemental bridal tour), gives the interest of the day to a brief summary of one of the most astounding careers of record.

PRESIDENT D. PORFIRIO DIAZ OF THE MEXICAN REPUBLIC, AS HE LOOKS TODAY. HE HAS HELD THE OFFICE OF PRESIDENT OF THE REPUBLIC CONTINUALLY SINCE 1876.

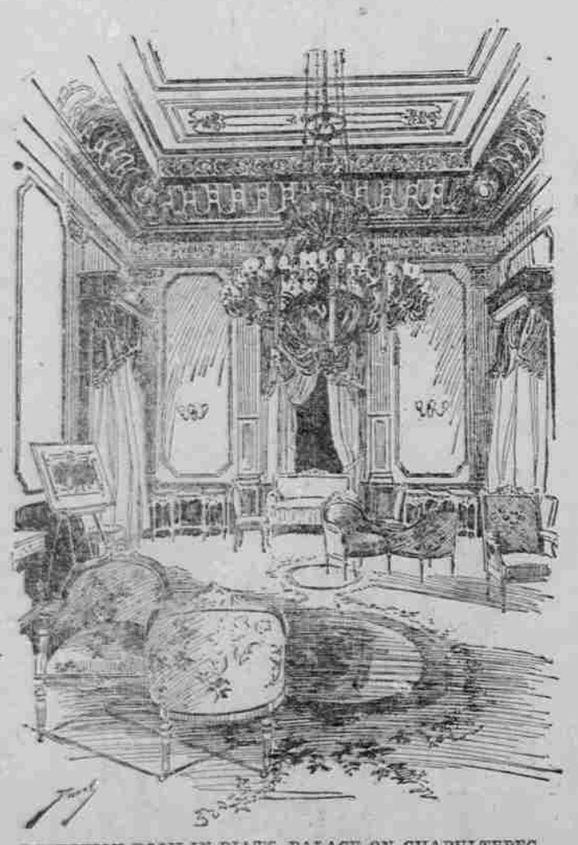
Like a Hero of Romance.

A strangely romantic mixture, surely, is this soldierly figure who has wrought such miracles in Mexico. The chief drawback to him as a subject for literature is that no fictionist would dare invent anything so "improbable" as his established history. An orphan nobody in a backwoods corner of Mexico; a callow theologue; a green law student, earning his way through a little Mexican instituto civil; a boy mayor of an Indian hamlet, wheedling his aboriginal constituents into drilling, for fun—and then drilling them for business enough to capture the capital of the state when a usurper held it; a guerilla chief in the wasting wars of the Reforma, when stolid, stubborn, sound but tactless Juarez was trying to put the church between fences and keep it there; the Sheridan and Grant in one through that unequal war in which Mexico protested against the usurpation of the little Napoleon; political opponent at last of his friend and patron, the great Indian president; and for nineteen years himself president of the country he first gave fair title to call itself a republic; a field officer as dashing as our Funston and of as phenomenal exploits, but in half a hundred battles; a commanding general whose grasp of a whole campaign has never been surpassed on this side of the world; a man as self-made as our rail-splitter and fortuned to wreak a far more vital change in his native land than even the extinguishment of slavery was in ours—here is certainly enough material for a hero. And I deeply believe that if there is such a thing at all, if mankind has a call to be proud of any special flower of manhood, for its own sake and not for racial vanity, Porfirio Diaz is entitled to whatever love and esteem manhood can give to manhood.

And from whatever point of view.

A Man Among Men.

With a good deal of the Napoleonic insight and inevitableness, there is no suspicion of the selfishness, the coldness, or that certain atrophy of humanity which marked the greatest soldier of all time. Diaz is always human, always of that untranslatable quality his people call simpatico, for which we have no near approach than "winning" and "magnetic." A cool egoist might have whipped the armies of Maximilian, but he never could have fused Mexico into the nation it is today—and it is doubtful if he could even have made the same record in war. It is always to be remembered as a sheer historic truth that no man ever before on any considerable scale conquered disciplined armies with so small and so unlicked an array of peons. Lexington is not parallel, nor any other battle wherein the raw recruits were our American yeomen. Diaz won his campaigns with material at which the most sanguine of our frontier campaigners would simply gasp. I do not despise the Mexican pelado; only I would not like to have to fight a battle with him for backing. And while the Mexican rural is a fighter of serious accountability, there were no rurales till Diaz made them, out of next to nothing. A man is judged in war and statecraft, by the material with which he has to work as well as by the gross result. In relatively modern history the only synonyms of Diaz' military career (as of the class where the ranks show for numbers, indeed, but the leader is really the army) are Cortez and Pizarro. Our own history has no fair parallel, even among the Marions and Custers and Roosevelts; for the very palpable reason that none of these, our lions, were leaders of sheep. No men have ever led a charge better; but some as wild heroes have been worse followed.



RECEPTION ROOM IN DIAZ'S PALACE ON CHAPULTEPEC.

Superb Physical Courage.

This is not the side of Diaz I care to dwell on. Splendid as personal heroism is, it is also (luckily for humanity) not uncommon. It is significant here particularly, because without it and the direct hero-worship it aroused, Diaz very certainly could not have done his larger work. The man who led so many forlorn hopes against superior numbers, discipline and arms; who was brevetted with so many scars; who could not only plan a complicated campaign but win it inch by inch at the head of his tatterdemallons; who spiked the enemy's battery with his own hands, in the heat of the melee; who served his own guns when the last gunner had fallen or run away; who dazzled his men and his people as well by his personal in-fighting as by the endless ingenuity and almost devilish inspirations by which he befooled or shattered the enemy—that sort of man, among any sort of men who love red blood and a steady hand, can get listeners after the fight when he speaks quietly as to citizens, telling them of national "righteousness, mercy and a judgment to come."

What He Has Done For Mexico.

No one would be more grateful for scientific demonstration that somewhere else in human history so radical a change has come over the political, social and commercial circumstance of a nation in so short a time as has befallen Mexico since Diaz wound the reins round his hands. I have not been able to find it for myself, with a fairly intimate knowledge of what Mexico was and is, and considerable attempt to learn something of other history.

Fifteen years ago, Mexico was a byword among the nations; unsettled by revolutions, moth-eaten politics, remote, uneasy, ignorant, inaccessible, unsafe and beggared. Today it is as law-abiding, as safe, as clearly administered, as any state in our nation, bar none; as easily traversed as any of our states west of the Missouri; as compact and national in spirit, and in fact as I could wish some better countries to be, of sound business prosperity in every line that ingenuity could question, and of a mental awakening as honorable as it is overwhelming.

Diaz not only crushed revolution—and the way to crush is to crush—and weeded out corruption in office, and cured the thieves and brigands and agitators who were curable and wiped out those that were not. He fetched into Mexico the largest railroad building that has been seen since our transcontinental lines, and supplemented them with the telegraph and a very good postal service. He slaughtered the obstructive interstate and intertown tariffs, multiplied manufactures, by an enormous figure, through judicious legislation, turned the balance of trade and changed revenue from a cavity to an eminence. He set a limit to the church, and began to make prisons we can justly envy. He greatly empowered colleges and from the medieval suppression of women to domestic ignorance, subverted that whole immemorial fabric and began (for the first time on a large scale, I believe, in any Spanish-speaking country) to provide liberally for women's real education. Long before he became a national figure he established a girl's school in Oaxaca; and now any bright girl in the republic can get a modern and practical education if she will.

The Father of the Public School.

Above all he is the father of the public school in Mexico; a system to which he gives not only the due turn of the reins, but his earnest personal care. There is not a village in Mexico, even in the remote Indian districts, which has not its free public school; and the normal schools of the republic are turning out yearly a little army of earnest and pretty well-equipped teachers for these schools. Manual training schools, professional schools, all are taking a rank in "poor old Mexico" which no one will disparage who fairly knows the facts.

Peace, security, communication, commerce, education—these are in Mexico the children of one patriot. They are, to speak generically, and only of proportions large enough to count in history, modern inventions there, and the inventions of Diaz. Mexico had taste of all of them before, at times and by unsatisfying bites, but now they are on the regular bill of fare. I do not deem it too much to call the man who could do this, so soon and from so little, one of the world's greatest figures, the man who did do it, one of the great patriots. And no one fully grounded in the chronicles and in the visible facts of the field, will call in question these apparently large statements. There sometimes are big men.

The President's Wife.

A factor not to be forgotten in the estimate of this great success is the present Senora Diaz, the president's young and lovely second wife. His first died in his years of stress, leaving him three good children. In 1883 he remarried, taking Carmen Rubio, the daughter of an old opponent, then not 20, but already a woman of the rarest charms. Not one of ten in Mexico would know who "la Senora Diaz" might be; everyone in Mexico old enough to talk, man, woman or child, Indian or mestizo or don, knows and reveres and loves "Carmelita," with a devotion as deep as it is patriarchal. Beautiful, gracious, highly educated, a type of the very highest womanhood, not alone the actual charities to which she devotes so much time, money and hard work, but her every relationship, have endeared her to her nation. It will be a fairly wise historian who shall be able to say how much of Mexican progress has been due to this lovely personality, winning hearts for the strong man at the helm.

Mexico a Safe Country.

Mexico today is as unemotional as New England. The most offensive tourist can go anywhere with as perfect safety as is found in this mortal sphere. He can say things that would get him knocked down in any New England village, and wear manners such as we never saw. It is quietly amusing to those who have any real knowledge of the country when he ascribes his safety to the "fact" that Mexico is a despotism; that Diaz is a czar, and the little policias at the corner his spies, and that no one dares be bad. The great secret is now that no one seriously wishes to. A good, serious man could go out any morning in any Mexican town under 20,000 and strangle all the soldiers in it, for a constitutional. He would not have prolonged need of a constitution, it is true; for there is law in Mexico, and it "goes." But the idea that the country is a military camp, or a close corporation of the despot, or a nursery of spies and passports is so grotesquely false and foolish that those who entertain it are proper forwarders of our gaiety. Mexico is pretty thoroughly governed, but absolutely without a trace of Caesarism. The "hard hand" (and those are his own words to me) "was used when need was to throttle brigandage and revolution and uplift willful wallowing. But the machinery is astonishingly simple and small and untyrannous, as great minds devise. And, strangest of all, it is not so much to carry deadheads and "make places" as it is to get effective public service. The service is not perfect, Mexico being still populous with human beings and not much invaded by angels (in spite of much immigration from the north).

Not Governed By the Machine.

But there is no "machine," no aggregation for purposes of plunder; and the civil service of Mexico, by and large, is not anything we can fully afford to sneeze at. Despite our proper distrust of everything we do not know, the time has come when to despise Mexico is to confess scant enlightenment. And for what he has done for a public which took its inspiration from us after ours drew its models, ill as it long followed them, as well as for his gallant figure as a man such as brave men lose everywhere and every when, President Diaz is likely to receive at our hands a memorable welcome.

CHARLES F. LUMMIS.

PATHETIC CHINESE INCIDENT.

A Mother's Attempt to Dispel the Blindness of Her Child.

(Lippincott's Magazine.)

This is what the Fair Samaritan saw after she had climbed the dark stairs behind the store and peeped into a room that was in semi-darkness, while she repressed Lee Chung with a warning finger that enforced silence. It was a room of considerable dimensions, with a low ceiling. The windows were so ill-placed, besides being barricaded, that the room was in twilight gloom, although the day was bright without. Its furniture was curiously disposed close against the walls, thus leaving a wide space in its midst. And in the room the woman Suey Yep was taking part with the little Lee Moy in what was evidently a daily occurrence.

With palms folded suppliantly before her, she regarded Lee Moy with a look of inexpressible love tinged with sadness. He was hitting wildly about him with a toy whip, and shouting angrily, his language being punctuated by strong Anglo-Saxon expletives.

"D—n you, mother! Why cometh not the sun?"

She submitted with the patience of an Oriental to the imperious language of my lord, her man-child.

"Oh, son of mine," she replied, with infinite tenderness, "the sun is still at Pekin, drying his hair—for he hath but now risen from his ocean bed. When he hath had his morning meal and has washed his face with dew and decked himself with marigolds, he will mount the clouds of purple and gold and amber and come to San Francisco."

"Do they of Pekin see more of him than we do?"

"Yes, my son—oh, would we were there!" she sobbed, "for the sun always shines there, but here it is mostly dark."

"We will go there, mother, at once!" He held up his hand for his mother to take.

"But it is a long and stony road from here to Pekin, and we must eat and drink before we start."

She led him to a little table, and set cakes before him and a cup of tea—which she fortified with a generous draught of sam shu.

When he had satisfied his appetite she prepared him another cup similarly sophisticated, and set it before him.

"Drink once more," she said, "for when we have left San Francisco we shall have no more tchah (tea) till we reach Pekin."

And the little man drank as he was directed and prepared for his daily flight across—the world.

Too Hot to Extinguish.

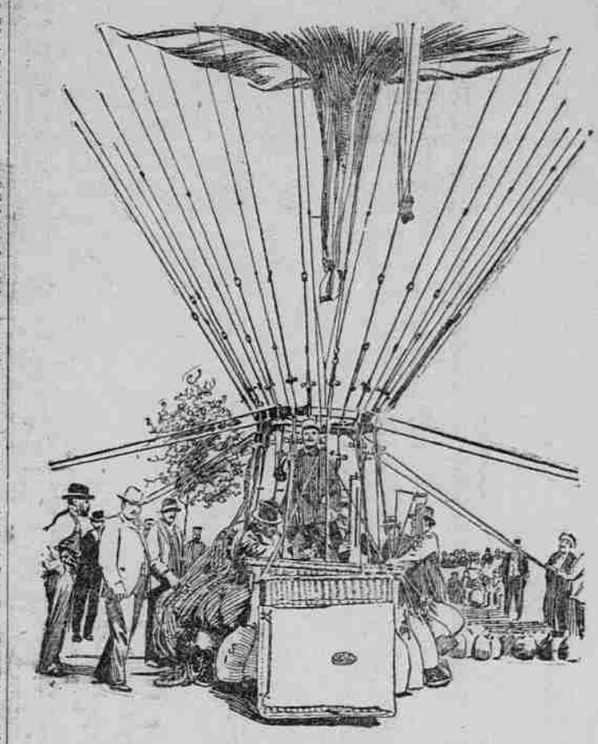
(Memphis Scimitar.)

A well known Mississippi farmer will have cause to remember his recent visit to Memphis. He stopped in a well known cafe, and among other things ordered a sirloin steak. A bottle of tobasco sauce was on the table, and mistaking it for catsup, he spread it quite lavishly on the steak and settled down to enjoy the meal. He cut off a big piece, but no sooner had it struck his mouth than he began to feel like his tongue was on fire. He twisted and turned, and soon had the eyes of every one in the dining hall fastened on him. The more he twisted and screwed his face the hotter the steak in his mouth got. He didn't know what was the matter. He could stand it no longer, and reaching up his hand he jerked out the burning bite, threw it on the floor, and in a very dramatic way exclaimed: "Now, d—— you, blaze!"

Thrilling Aerial Voyage Over Alps

Scientists Skim Along in Midair at Express Train Speed, Studying Air Currents, Light Effects and Meteorological Phenomena—Dangers Threatened, But Were Eluded—Balloon Traveled More Than Mile a Minute—Fell Faster Than Ballast Bags.

A report has just been made of the most extraordinary balloon voyage on record. It is of the most intense interest to scientists and to everyone studying the problem of aerial navigation. It sets aside one of the objections which have been offered to the flying machine as a mode of traveling, by providing that man feels no serious discomfort either from cold or from immense speed when at a great height. And there were other scientific results of considerable importance which will be told of farther on in this article. The story of the trip itself as another triumph of man over nature is of thrilling interest to everyone.



Balloon with scientific apparatus, ready for the start.

Four men in the balloon Wega crossed the Alps from Stilten in Switzerland, to Mt. Soule in France, some distance north of Dijon. The speed was equal to that of the fastest European railway train, and at times exceeded that of the most rapid American express. A distance of 142 miles was covered in 344 minutes.

The expedition was undertaken for purely scientific purposes. The captain of the balloon was Professor Ed. Spelterini, who has made more than 500 successful balloon ascensions. He was accompanied by the eminent geologist, Professor Albert Heim, and Professor Julius Maurer, the great meteorologist. One passenger was taken along, a student of Professor Heim. The project of ascending the Alps in a balloon was broached as long ago as 1891, but it was slow of realization. Money had to be collected for the construction of the special balloon required and many other preparations were necessary.

An Especially Built Balloon.

The balloon was built for the purely scientific purpose of the trip. The diameter of the balloon when filled was about sixty feet; its circumference was 190 feet; capacity 9,000 cubic feet. It was made of Japanese pongee silk, of great strength, and was built in forty-eight meridional chambers, consisting of no less than 3,168 pieces of silk. The interior received six coats of varnish and the exterior four coats. The covering net was made of Anjou hemp treated with rubber, with 21,504 meshes. The weight of the balloon with anchor, ropes and all was 994 kilogram. The ballast, scientific instruments and passengers added 2,096 kilogram, so that the balloon had to lift 3,090 kilogram as it ascended in air. It required five days to fill the balloon with gas, and then there was a delay of three days before the weather appeared favorable. The wind must be in the proper direction, and the air not too cloudy to prevent exact observations. Pilot balloons were sent up finally and showed that the wind set in the proper direction to carry the balloon directly over the Alps and the Jura, i. e., southwest.

The Ascent.

Four men held the ropes of the captive balloon, ready to loose them at the signal. The passengers climbed into the car that swung beneath it and threw out sacks of ballast equal to their weight. Captain Sperterini cried "Lachez tout" (let go all) and the huge balloon majestically rose amid the shouts of thousands of spectators, for scientists had come from all over Europe to see this experiment. But let Professor Heim tell of it in his own words:

"It was 10:53 a. m. as the Wega rose into the air. At first we ascended at the rate of over a yard a second, but soon commenced to go faster. We felt the wind of the valley no longer at 7,200 feet, but stood still for a moment poised in air, but the next minute, 11:06, we felt the southeast wind of the upper air, and the balloon darted to the northwest at lightning speed, in a straight line. The shadow of the balloon fell on the clouds with startling distinctness.

A Thrilling Moment.

"And now we waited with bated breath to learn our fate. Would we be dashed against the mountain by a powerful wind current or—and at 11:41 our doubts were settled as we soared above the highest peak of the mountain (10,816 feet), reaching a height of 13,062 feet above sea level. Our course did not diverge a moment from a straight line. When we were 6,900 feet over the valley we traveled horizontally ten feet a second; when we were 14,000 feet high we moved horizontally thirty-three feet a second, but now we went first at eighty-two feet, then at eighty-eight feet a second, over a mile a minute.

"The currents of air in the valley give not the least intimation of the direction or force of the upper currents. Our course, so long as we were in the upper current of air, was astonishingly straight, for we diverged from the direct route in our course hardly half a mile to right or left. We were borne by a mighty current of the air sea.

"At 12:55 we were 18,388 feet above sea level, and then we descended slightly. At 3:43 we reached the highest point attained during our voyage, 22,440 feet.

Might Have Gone to Paris.

"The balloon was in such good condition that we could have stayed up in it all night, and we had plenty of ballast, so the captain asked us:

"'Do you want to travel all night?'

"A glance at my map showed me that we were moving direct for Paris, if the wind still held, but we were traveling so fast that we should be in Paris before midnight, and on the ocean before daybreak.

"This would never do, and as a descent by night is accompanied by many dangers we decided that we must land now if at all. From 3:43 to 4:23 we descended from 22,400 feet to 7,920 feet, at a rate of 363 feet a minute. Almost seven feet a second.

"Beneath us was a sea of mist.

"'It's going too fast; drop a sack of sand overboard—now another sack!' the captain shouted.

"The sun was hidden behind clouds. We were passing through a shower of sand, for the balloon was actually falling faster than the sand we had thrown out. It was the most intensely thrilling and dangerous moment of the voyage. Could we stop her tremendous descent? If not our contact with the earth would well nigh annihilate us! Imagine falling a mill and a half!

"But over went more ballast, and more—and yet more. We had dropped almost a mile when we slackened as we passed into the clouds of mist. It was depressingly gloomy and gray about us. We looked down. Spelterini was the first to see the straight white lines of streets shining in a village. All was at last well. The mist did not reach so far as the earth. We could now see how to land, but there was a strong east wind. We sailed over the red roofs of a village: it was Riviere.

"'Half a sack of sand overboard or we shall land among the hop-poles—quick!'

"And as we floated to the east we reached an open, treeless plateau, with woods behind.

"Here it was or nowhere!

"Let go the anchor!"

"The anchor caught, the vents were opened, and hardly twenty seconds later the balloon lay half empty on the ground. It was 4:37 p. m.

142 Miles In 344 Minutes.

"The balloon had passed over 142 miles in 344 minutes, or five hours and forty-four minutes. In the upper current it had traveled 118 miles in 285 minutes. This is forty and one-half feet a second. We had been traveling at railway speed!

"But you do not feel the speed in the balloon. You seem to hover stationary in that wondrous silence. There was not the least jolting, we did not know that we were moving unless we looked intently at the earth beneath and saw it slipping by. We felt the motion as little as we feel the motion of the earth around the sun.

"Our balloon journey had been neither the highest nor the furtherest ever taken, but it was the first that had been taken over a specified mountain, and the first in which a balloon had remained above 19,000 feet for hours at a time.

"The trip of the Wega over the Alps was the 503rd successful ascension conducted by Captain Spelterini without accident.

"We did not even feel dizzy," says Professor Heim, "and our trip proved that dizziness is not one of the accompaniments of traveling by balloon, a long-mooted question. The most wonderful thing of all to us was the perfect quiet and sacred silence of the heights. Whether the balloon went up or down, or rushed through the air with railway speed, we felt none of it. We were in absolute quiet. Then we knew what quiet is. About 15,000 feet you hear the blood rushing through your ears; at 18,000 feet the noise of the circulation of your blood is unbearable. It is altogether different from the stillness of a mountain top. There is still the noise coming from below, even though brokenly. But with us the silence was absolute—oppressive.

Sensations of the Voyagers.

"Until we had ascended to 12,000 feet all felt well. At 14,000 feet Dr. Biedermann complained of palpitation of the heart. At 19,000 feet Dr. Maurer complained of severe sticking pains in the back of his head and of nausea.

"At 18,000 feet and 20,000 feet I felt wonderfully well, sitting in one corner of the car on a sack of ballast. Half dreaming I looked out over the shining clouds, or at the yellowish horizon, or upwards at the black sky. I did not want any oxygen. I felt no difficulty in breathing, no uneasiness whatever, no 'air-hunger.' But the ability to work was gone, my energy was lost. It required a great effort for me to take my note book up and write in it. My pulse was very weak, I could hardly find it, but it was quietly beating sixty to sixty-three times a second. All at once I felt freezing cold. But it was so delightful to sit there quietly. Better to freeze than take the trouble to put on the cloak that lay at my side. But my conscience spoke, saying, 'You ought to observe, look around, note what you see!' and I looked out, but I noticed nothing and wrote not a word. Only to sit quietly and let the balloon ascend to heavenly heights, that must be a beautiful end!

"But when we had descended 1,500 or 1,600 feet we were as new born. The effects of the rarified air were felt only while we were in it.

"Strange to say during all our trip none of us felt the least desire for food.

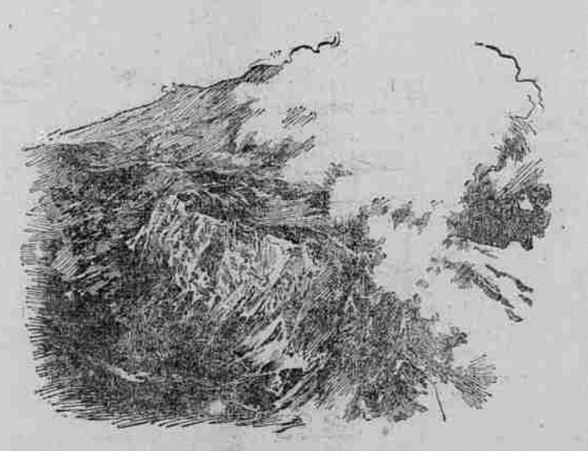
The View From the Balloon.

"To describe the view from the balloon is like trying to describe a symphony to a deaf man. The woods looked like the softest moss. The varying colors of the foliage were clearer than ever, melting into wondrous harmony. The lace work of field and meadow, of fruit trees and forests wove a woof of beauteous color. All of the colors seemed far brighter from the balloon, for fresher; and as we rose higher and higher all took on a beautiful violet tint. The cities looked like master paintings, the streets like white threads holding all together. If I could tell all that I saw it would be my greatest earthly pleasure, but language is all too feeble. The coloring of the clouds, the shadows on the mountains, what words can tell their beauty!"

What the Voyage Proved.

The results of this unparalleled flight over the Alps and Jura are of more than passing interest. It has shown that healthy men may ascend to about four miles above sea level and remain at this tremendous height without any serious inconvenience. It has shown also that dizziness is not an accompaniment of balloon-voyaging, a most important point for future aerial navigation.

The phenomena observed were new and interesting. The fact that the earth appears to be bathed in an atmosphere of violet color when seen from the balloon is accounted for by Professor Heim in this way. "When we look at a mountain as we stand on the earth it appears to be blue, on account of the thick atmosphere at the earth's surface. But when seen from a balloon the blue atmosphere spectacles through which we gaze are made paler on account of the rarity of the atmospheric medium, and we at first see them in their natural colors. Seen from above they appear like islands, especially when we are above 19,000 feet. Mont Blanc was discernable only by the clouds that surrounded its summit, for it was hidden in mist. Jura looked like a series of ridges on the earth's surface, yet we could note all of its valleys and heights, as if they were drawn on a relief map. All of the mountain summits were encircled by balls of cloud (cumuli), some of which extended deeply into the valleys.



Bird's eye view of the Alps and clouds taken from the balloon.

No Birds In High Air.

"The birds which appear from earth to be near the highest mountain peaks never really fly very high. The atmosphere above 7,000 feet appears to be without a single inhabitant. There was not a bird to be seen, when we rose to 19,000 feet, although we were over the valleys in which the ravens are most common, and I watched intently for a glimpse of one.

"Above 16,000 feet the coloring of the balloon and ourselves appeared to change. The sun cast no warm yellow light on us, but a pure white light, white to ghastliness. All of the shadows were a deep black. I noted the depth of this shadow when I had to look for something in a shaded corner of the car.

"If we looked first at the horizon and then at earth the former seemed to be blue-violet, the latter a bright yellow. The blue-violet coloring of the earth appeared at 15,000 feet and over. This was explicable by the fact that the yellow rays of the sunlight were absorbed in the atmospheric covering of the earth as we looked towards it, leaving the violet rays in the ascendant. Seen from the moon, the earth must look violet. Looking at mountains, distant not less than fifty miles, they appeared a bright yellow. In this case the white surfaces act as sources of light behind the thick layers of atmosphere, and the penetrating yellow-red light (reflected as blue) made the distant mountains appear yellow to our eyes.

Gorgeous Coloring.

"The lakes lying beneath us offered a strong contrast to the yellowish horizon. Lake Leman was one mass of deep blue, the color of a perfect sapphire. When I looked at the sky I found that it was no longer blue, but was so dark as to be almost black. It reminded me of the color of the Black sea. Here is another proof that it is the atmosphere alone which makes the sky appear blue to us on earth, but when we had ascended through 19,000 feet of it, this blue veil was for the most part beneath us and we saw the sky in all its forbidding darkness. We noted, too, that it made no difference in the lower altitudes whether the air was laden with 10 per cent or 95 per cent moisture, the blueness of the sky was the same. Can we any longer maintain the theory that this heavenly blue is made up of little particles of matter? Impossible! answered by knowledge of color. In that case it could never be so constant in its color-tone. It ought then to change from purple to bluish green. What other theory can be suggested? The heavenly blue must belong to the atmosphere as such. Only if the optically pure atmosphere is its bearer can it operate as it does on the landscape, when we observe it.

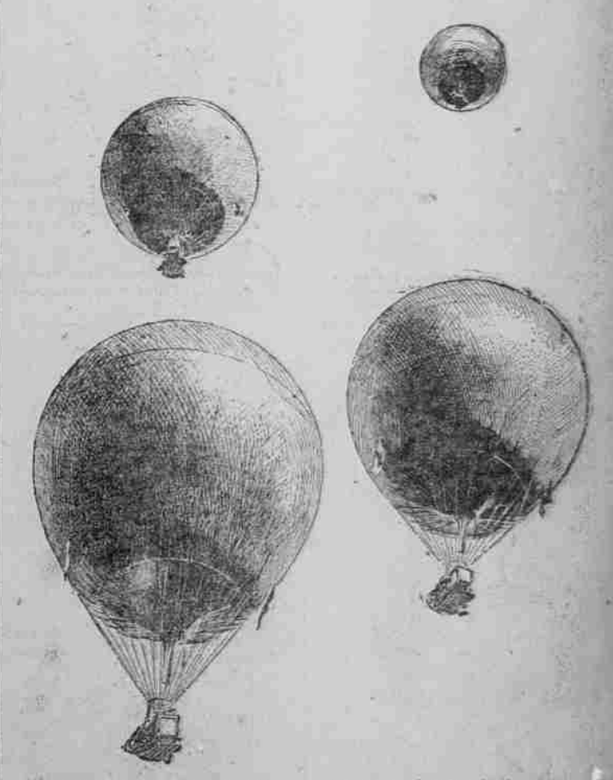
The Blue of the Sky Explained.

"It seems to me that we are forced to believe that there is a direct reflection of the heavenly blue rays through the molecules of the air. These appearances are well known in flourescense. It is not true, then, that the heavenly blue is a phenomenon of flourescense? This idea does not seem to me to be in contradiction with any of the color phenomena of the atmosphere. Its fluids, such as petroleum, for example, we are familiar with this phenomenon. If we could have other gases in such thick layers as the air we might observe similar flourescense.

"The meteorological observations were in the hands of Dr. Julius Maurer, who was provided with all of the latest and best devices for registering the results of this experiment. To observe the atmospheric pressure he had two registering aneroid barometers and one quicksilver barometer for corrective purposes. The temperature was taken by an Assmann thermometer fixed to the balloon and read by a spyglass. A thermograph and hygrograph were fixed in position by sticks in a willow basket covered by a white cloth, but open at the top, the basket being tied to the outside of the car. He also had a late model balloon-barograph which registered its results automatically.

"It is most remarkable, as shown in the tables and self-registering diagram of the hygrograph, to note the extreme dryness of the upper layers of the atmosphere between 16,000 and 19,000 feet. According to the hygrograph, the relative humidity is only 20 or 20 degrees."

As a pioneer scientific expedition this is considered most successful, pointing to a great future for the use of the balloon, for meteorological and physical observations.



Remarkable picture taken from a fixed point, showing balloon in four positions as it vanished.

Tell Your Sister

A Beautiful Complexion is an impossibility without good pure blood, the sort that only exists in connection with good digestion, a healthy liver and bowels. Karl's Clover Root Tea acts directly on the bowels, liver and kidneys, keeping them in perfect health. Price 25 cts. and 50 cts. Sold by Nelden-Judson and