


# THE WORKS <br> OF 

## EDGAR ALLAN POE

IN TEN VOLUMES VOLUME II

$x$

TALES OF THE GROTESQUE AND<br>ARABESQUE



PORTRAIT FROM A DAGUERREOTYPE IN THE POSSESSION OF E. C. STEDMAN

## THE WORKS

## OF

NETVLY COLLECTED AND EDITED, WITH A MEMOIR, CRITICAL INTRODUCTIONS, AND NOTES, BY EDMUND CLARENCE STEDMAN AND GEORGE EDWARD WOODBERRY

THE ILLUSTRATIONS BY
ALBERT EDWARD STERNER

## IN TEN VOLUMES

VOLUME II


CHICAGO STONE छ KIMBALL

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## I <br> TALES OF CONSCIENCE

## TALES OF CONSCIENCE

## WILLIAM WILSON

> What say of it? what say of conscience grim, That spectre in my path? $$
\text { Chamberlayne: Pharronida. }
$$

LET me call myself, for the present, William Wilson. The fair page now lying before me need not be sullied with my real appellation. This has been already too much an object for the scorn - for the horror - for the detestation of my race. To the uttermost regions of the globe have not the indignant winds bruited its unparalleled infamy? Oh, outcast of all outcasts most abandoned! - to the earth art thou not forever dead? to its honors, to its flowers, to its golden aspirations? - and a cloud, dense, dismal, and limitless, does it not hang eternally between thy hopes and heaven?

I would not, if I could, here or to-day, embody a record of my later years of unspeakable misery and unpardonable crime. This epoch, these later years, took unto themselves a sudden elevation in turpitude, whose origin alone it is my present purpose to assign. Men usually grow base by degrees. From me, in an instant, all virtue dropped bodily as a mantle. From
comparatively trivial wickedness I passed, with the stride of a giant, into more than the enormities of an Elah-Gabalus. What chance - what one event brought this evil thing to pass, bear with me while I relate. Death approaches; and the shadow which foreruns him has thrown a softening influence over my spirit. I long, in passing through the dim valley, for the sympathy - I had nearly said for the pity of my fellow-men. I would fain have them believe that I have been, in some measure, the slave of circumstances beyond human control. I would wish them to seek out for me, in the details I am about to give, some little oasis of fatality amid a wilderness of error. I would have them allow - what they cannot refrain from allowing - that, although temptation may have erewhile existed as great, man was never thus, at least, tempted before - certainly, never thus fell. And is it therefore that he has never thus suffered ? Have I not indeed been living in a dream? And am I not now dying a victim to the horror and the mystery of the wildest of all sublunary visions?

I am the descendant of a race whose imaginative and easily excitable temperament has at all times rendered them remarkable; and, in my earliest infancy, I gave evidence of having fully inherited the family character. As I advanced in years it was more strongly developed; becoming, for many reasons, a cause of serious disquietude to my friends, and of positive injury to myself. I grew self-willed, addicted to the wildest caprices, and a prey to the most ungovernable passions. Weak-minded, and beset with constitutional infirmities akin to my own, my parents could do but little to check the evil propensities which distinguished me. Some feeble and ill-directed efforts
resulted in complete failure on their part, and, of course, in total triumph on mine. Thenceforward my voice was a household law ; and at an age when few children have abandoned their leading-strings I was left to the guidance of my own will, and became, in all but name, the master of my own actions.

My earliest recollections of a school-life are connected with a large, rambling, Elizabethan house, in a misty-looking village of England, where were a vast number of gigantic and gnarled trees, and where all the houses were excessively ancient. In truth, it was a dream-like and spirit-soothing place, that venerable old town. At this moment, in fancy, I feel the refreshing chilliness of its deeply-shadowed avenues, inhale the fragrance of its thousand shrubberies, and thrill anew with undefinable delight at the deep hollow note of the church-bell, breaking, each hour, with sullen and sudden roar, upon the stillness of the dusky atmosphere in which the fretted Gothic steeple lay imbedded and asleep.

It gives me, perhaps, as much of pleasure as I can now in any manner experience to dwell upon minute recollections of the school and its concerns. Steeped in misery as I am - misery, alas ! only too real - I shall be pardoned for seeking relief, however slight and temporary, in the weakness of a few rambling details. These, moreover, utterly trivial, and even ridiculous in themselves, assume to my fancy adventitious importance, as connected with a period and a locality when and where I recognize the first ambiguous monitions of the destiny which afterwards so fully overshadowed me. Let me then remember.

The house, I have said, was old and irregular. The grounds were extensive, and a high and solid
brick wall, topped with a bed of mortar and broken glass, encompassed the whole. This prison-like rampart formed the limit of our domain ; beyond it we saw but thrice a week - once every Saturday afternoon, when, attended by two ushers, we were permitted to take brief walks in a body through some of the neighboring fields - and twice during Sunday, when we were paraded in the same formal manner to the morning and evening service in the one church of the village. Of this church the principal of our school was pastor. With how deep a spirit of wonder and perplexity was I wont to regard him from our remote pew in the gallery, as, with step solemn and slow, he ascended the pulpit! This reverend man, with countenance so demurely benign, with robes so glossy and so clerically flowing, with wig so minutely powdered, so rigid and so vast, - could this be he who, of late, with sour visage, and in snuffy habiliments, administered, ferule in hand, the Draconian Laws of the academy? Oh, gigantic paradox, too utterly monstrous for solution!

At an angle of the ponderous wall frowned a more ponderous gate. It was riveted and studded with iron bolts, and surmounted with jagged iron spikes. What impressions of deep awe did it inspire! It was never opened save for the three periodical egressions and ingressions already mentioned; then, in every creak of its mighty hinges, we found a plenitude of mystery - a world of matter for solemn remark, or for more solemn meditation.

The extensive enclosure was irregular in form, having many capacious recesses. Of these, three or four of the largest constituted the play-ground. It was level, and covered with fine hard gravel. I well re-
member it had no trees, nor benches, nor anything similar within it. Of course it was in the rear of the house. In front lay a small parterre, planted with box and other shrubs; but through this sacred division we passed only upon rare occasions indeed such as a first advent to school or final departure thence, or perhaps when, a parent or friend having called for us, we joyfully took our way home for the Christmas or Midsummer holidays.

But the house! - how quaint an old building was this!-to me how veritably a palace of enchantment! There was really no end to its windings - to its incomprehensible subdivisions. It was difficult, at any given time, to say with certainty upon which of its two stories one happened to be. From each room to every other there were sure to be found three or four steps either in ascent or descent. Then the lateral branches were innumerable, inconceivable, and so returning in upon themselves that our most exact ideas in regard to the whole mansion were not very far different from those with which we pondered upon infinity. During the five years of my residence here I was never able to ascertain, with precision, in what remote locality lay the little sleeping apartment assigned to myself and some eighteen or twenty other scholars.

The school-room was the largest in the house - I could not help thinking, in the world. It was very long, narrow, and dismally low, with pointed Gothic windows and a ceiling of oak. In a remote and ter-ror-inspiring angle was a square enclosure of eight or ten feet, comprising the sanctum, "during hours," of our principal, the Reverend Dr. Bransby. It was a solid structure, with massy door, sooner than open which in the absence of the "Dominie" we would all
have willingly perished by the peine forte et dure. In other angles were two other similar boxes, far less reverenced, indeed, but still greatly matters of awe. One of these was the pulpit of the "classical" usher, one of the "English and mathematical." Interspersed about the room, crossing and recrossing in endless irregularity, were innumerable benches and desks, black, ancient, and time-worn, piled desperately with muchbethumbed books, and so beseamed with initial letters, names at full length, grotesque figures, and other multiplied efforts of the knife, as to have entirely lost what little of original form might have been their portion in days long departed. A huge bucket with water stood at one extremity of the room, and a clock of stupendous dimensions at the other.

Encompassed by the massy walls of this venerable academy, I passed, yet not in tedium or disgust, the years of the third lustrum of my life. The teeming brain of childhood requires no external world of incident to occupy or amuse it ; and the apparently dismal monotony of a school was replete with more intense excitement than my riper youth has derived from luxury, or my full manhood from crime. Yet I must believe that my first mental development had in it much of the uncommon - even much of the outré. Upon mankind at large the events of very early existence rarely leave in mature age any definite impression. All is gray shadow - a weak and irregular remembrance - an indistinct regathering of feeble pleasures and phantasmagoric pains. With me this is not so. In childhood I must have felt with the energy of a man what I now find stamped upon memory in lines as vivid, as deep, and as durable as the exergues of the Carthaginian medals.

Yet in fact - in the fact of the world's view - how little was there to remember! The morning's awakening, the nightly summons to bed; the connings, the recitations; the periodical half-holidays, and perambulations; the play-ground, with its broils, its pastimes, its intrigues; - these, by a mental sorcery long for gotten, were made to involve a wilderness of sensation, a world of rich incident, an universe of varied emotion, of excitement the most passionate and spirit-stirring. "Oh, le bon temps, que ce siècle de fer!"

In truth, the ardor, the enthusiasm, and the imperiousness of my disposition, soon rendered me a marked character among my schoolmates, and by slow but natural gradations gave me an ascendency over all not greatly older than myself : over all with a single exception. This exception was found in the person of a scholar who, although no relation, bore the same Christian and surname as myself, - a circumstance, in fact, little remarkable; for, notwithstanding a noble descent, mine was one of those every-day appellations which seem by prescriptive right to have been, time out of mind, the common property of the mob. In this narrative I have therefore designated myself as William Wilson, - a fictitious title not very dissimilar to the real. My namesake alone, of those who in schoolphraseology constituted "our set," presumed to com pete with me in the studies of the class - in the sports and broils of the play-ground - to refuse implicit belief in my assertions, and submission to my will - in. deed, to interfere with my arbitrary dictation in any respect whatsoever. If there is on earth a supreme and unqualified despotism, it is the despotism of a master-mind in boyhood over the less energetic spirits of its companions.

Wilson's rebellion was to me a source of the greatest embarrassment; the more so as, in spite of the bravado with which in public I made a point of treating him and his pretensions, I secretly felt that I feared him, and could not help thinking the equality, which he maintained so easily with myself, a proof of his true superiority; since not to be overcome cost me a perpetual struggle. Yet this superiority, even this equality, was in truth acknowledged by no one but myself; our associates, by some unaccountable blindness, seemed not even to suspect it. Indeed, his competition, his resistance, and especially his impertinent and dogged interference with my purposes, were not more pointed than private. He appeared to be destitute alike of the ambition which urged, and of the passionate energy of mind which enabled, me to excel. In his rivalry he might have been supposed actuated solely by a whimsical desire to thwart, astonish, or mortify myself; although there were times when I could not help observing, with a feeling made up of wonder, abasement, and pique, that he mingled with his injuries, his insults, or his contradictions, a certain most inappropriate, and assuredly most unwelcome, affectionateness of manner. I could only conceive this singular behavior to arise from a consummate self-conceit assuming the vulgar airs of patronage and protection.

Perhaps it was this latter trait in Wilson's conduct, conjoined with our identity of name, and the mere accident of our having entered the school upon the same day, which set afloat the notion that we were brothers, among the senior classes in the academy. These do not usually inquire with much strictness into the affairs of their juniors. I have before said, or should have said, that Wilson was not in the most remote degree
connected with my family. But assuredly if we had been brothers we must have been twins; for, after leaving Dr. Bransby's, I casually learned that my namesake was born on the nineteenth of January, 1813; and this is a somewhat remarkable coincidence; for the day is precisely that of my own nativity.

It may seem strange that in spite of the continual anxiety occasioned me by the rivalry of Wilson, and his intolerable spirit of contradiction, I could not bring myself to hate him altogether. We had, to be sure, nearly every day a quarrel in which, yielding me publicly the palm of victory, he, in some manner, contrived to make me feel that it was he who had deserved it; yet a sense of pride on my part, and a veritable dignity on his own, kept us always upon what are called "speaking terms," while there were many points of strong congeniality in our tempers, operating to awake in me a sentiment which our position alone, perhaps, prevented from ripening into friendship. It is difficult, indeed, to define, or even to describe, my real feelings towards him. They formed a motley and heterogeneous admixture: some petulant animosity, which was not yet hatred, some esteem, more respect, much fear, with a world of uneasy curiosity. To the moralist it will be unnecessary to say, in addition, that Wilson and myself were the most inseparable of companions.

It was no doubt the anomalous state of affairs existing between us, which turned all my attacks upon him (and they were many, either open or covert) into the channel of banter or practical joke (giving pain while assuming the aspect of mere fun) rather than into a more serious and determined hostility. But my endeavors on this head were by no means
uniformly successful, even when my plans were the most wittily concocted; for my namesake had much about him, in character, of that unassuming and quiet austerity which, while enjoying the poignancy of its own jokes, has no heel of Achilles in itself, and absolutely refuses to be laughed at. I could find, indeed, but one vulnerable point, and that lying in a personal peculiarity arising, perhaps, from constitutional disease, would have been spared by any antagonist less at his wit's end than myself:-my rival had a weak. ness in the faucial or guttural organs, which precluded him from raising his voice at any time above a very low whisper. Of this defect I did not fail to take what poor advantage lay in my power.

Wilson's retaliations in kind were many ; and there was one form of his practical wit that disturbed me beyond measure. How his sagacity first discovered at all that so petty a thing would vex me, is a question I never could solve; but having discovered, he habitually practised the annoyance. I had always felt aversion to my uncourtly patronymic, and its very common, if not plebeian, prænomen. The words were venom in my ears; and when, upon the day of my arrival, a second William Wilson came also to the academy, I felt angry with him for bearing the name, and doubly disgusted with the name because a stranger bore it, who would be the cause of its twofold repetition, who would be constantly in my presence, and whose concerns, in the ordinary routine of the school business, must inevitably, on account of the detestable coincidence, be often confounded with my own.

The feeling of vexation thus engendered grew stronger with every circumstance tending to show
resemblance, moral or physical, between my rival and myself. I had not then discovered the remarkable fact that we were of the same age; but I saw that we were of the same height, and I perceived that we were even singularly alike in general contour of person and outline of feature. I was galled, too, by the rumor touching a relationship, which had grown current in the upper forms. In a word, nothing could more seriously disturb me, (although I scrupulously concealed such disturbance) than any allusion to a similarity of mind, person, or condition existing between us. But, in truth, I had no reason to believe that (with the exception of the matier of relationship, and in the case of Wilson himself) this similarity had ever been made a subject of comment, or even observed at all by our schoolfellows. That he observed it in all its bearings, and as fixedly as I, was apparent; but that he could discover in such circumstances so fruitful a field of annoyance can only be attributed, as I said before, to his more than ordinary penetration.

His cue, which was to perfect an imitation of my. self, lay both in words and in actions; and most admirably did he play his part. My dress it was an easy matter to copy; my gait and general manner were, without difficulty, appropriated; in spite of his constitutional defect, even my voice did not escape him. My louder tones were, of course, unattempted, but then the key, - it was identical; and his singular whisper, - it grew the very echo of my own.

How greatly this most exquisite portraiture harassed me (for it could not justly be termed a caricature) I will not now venture to describe. I had but one con-
solation - in the fact that the imitation, apparently, was noticed by myself alone, and that I had to endure only the knowing and strangely sarcastic smiles of my namesake himself. Satisfied with having produced in my bosom the intended effect, he seemed to chuckle in secret over the sting he had inflicted, and was characteristically disregardful of the public applause which the success of his witty endeavors might have so easily clicited. That the school, indeed, did not feel his design, perceive its accomplishment, and participate in his sneer, was, for many anxious months, a riddle I could not resolve. Perhaps the gradation of his copy rendered it not so readily perceptible; or, more possibly, I owed my security to the masterly air of the copyist, who, disdaining the letter, (which in a painting is all the obtuse can see) gave but the full spirit of his original for my individual contemplation and chagrin.

I have already more than once spoken of the disgusting air of patronage which he assumed toward me, and of his frequent officious interference with my will. This interference often took the ungracious character of advice; advice not openly given, but hinted or insinuated. I received it with a repug. nance which gained strength as I grew in years. Yet, at this distant day, let me do him the simple justice to acknowledge that I can recall no occasion when the suggestions of my rival were on the side of those errors or follies so usual to his immature age and seeming inexperience ; that his moral sense, at least, if not his general talents and worldly wisdom, was far keener than my own; and that I might, to-day, have been a better, and thus a happier man, had I less frequently rejected the counsels embodied
in those meaning whispers which I then but too cordially hated and too bitterly despised.

As it was, I at length grew restive in the extreme under his distasteful supervision, and daily resented more and more openly what I considered his intolerable arrogance. I have said that, in the first years of our connection as schoolmates, my feelings in regard to him might have been easily ripened into friendship; but, in the latter months of my residence at the academy, although the intrusion of his ordinary manner had, beyond doubt, in some measure abated, my sentiments, in nearly similar proportion, partook very much of positive hatred. Upon one occasion he saw this, I think, and afterwards avoided or made a show of avoiding me.

It was about the same period, if I remember aright, that, in an altercation of violence with him, in which he was more than usually thrown off his guard, and spoke and acted with an openness of demeanor rather foreign to his nature, I discovered, or fancied I discovered, in his accent, his air and general appearance, a something which first startled, and then deeply interested me, by bringing to mind dim visions of my earliest infancy - wild, confused and thronging memories of a time when memory herself was yet unborn. I cannot better describe the sensation which oppressed me than by saying that I could with difficulty shake off the belief of my having been acquainted with the being who stood before me, at some epoch very long ago - some point of the past even infinitely remote. The delusion, however, faded rapidly as it came; and I mention it at all but to define the day of the last conversation I there held with my singular namesake.

The huge old house, with its countless subdivisions, had several large chambers communicating with each other, where slept the greater number of the students. There were, however, (as must necessarily happen in a building so awkwardly planned) many little nooks or recesses, the odds and ends of the structure ; and these the economic ingenuity of Dr. Bransby had also fitted up as dormitories; although, being the merest closets, they were capable of accommodating but a single individual. One of these small apartments was occupied by Wilson.

One night, about the close of my fifth year at the school, and immediately after the altercation just mentioned, finding every one wrapped in sleep, I arose from bed, and, lamp in hand, stole through a wilderness of narrow passages from my own bedroom to that of my rival. I had long been plotting one of those illnatured pieces of practical wit at his expense in which I had hitherto been so uniformly unsuccessful. It was my intention, now, to put my scheme in operation, and I resolved to make him feel the whole extent of the malice with which I was imbued. Having reached his closet, I noiselessly entered, leaving the lamp, with a shade over it, on the outside. I advanced a step, and listened to the sound of his tranquil breathing. Assured of his being asleep, I returned, took the light, and with it again approached the bed. Close curtains were around it, which, in the prosecution of my plan, I slowly and quietly withdrew, when the bright rays fell vividly upon the sleeper, and my eyes at the same moment upon his countenance. I looked, - and a numbness, an iciness of feeling, instantly pervaded my frame. My breast heaved, my knees tottered, my whole spirit became possessed with an
objectless yet intolerable horror. Gasping for breath, I lowered the lamp in still nearer proximity to the face. Were these, - these the lineaments of William Wilson? I saw, indeed, that they were his, but I shook as if with a fit of the ague, in fancying they were not. What was there about them to confound me in this manner? I gazed, - while my brain reeled with a multitude of incoherent thoughts. Not thus he appeared - assuredly not thus - in the vivacity of his waking hours. The same name! the same contour of person! the same day of arrival at the academy ! And then his dogged and meaningless imitation of my gait, my voice, my habits, and my manner! Was it, in truth, within the bounds of human possibility, that what I now saw was the result, merely, of the habitual practice of this sarcastic imitation? Awestricken, and with a creeping shudder, I extinguished the lamp, passed silently from the chamber, and left, at once, the halls of that old academy, never to enter them again.

After a lapse of some months, spent at home in mere idleness, I found myself a student at Eton. The brief interval had been sufficient to enfeeble my remembrance of the events at Dr. Bransby's, or at least to effect a material change in the nature of the feelings with which I remembered them. The truth - the tragedy - of the drama was no more. I could now find room to doubt the evidence of my senses; and seldom called up the subject at all but with wonder at the extent of human credulity, and a smile at the vivid force of the imagination which I hereditarily possessed. Neither was this species of scepticism likely to be diminished by the character of the life I led at Eton. The vortex of thoughtless folly, into
which I there so immediately and so recklessly plunged, washed away all but the froth of my past hours, engulfed at once every solid or serious impression, and left to memory only the veriest levities of a former existence.

I do not wish, however, to trace the course of my miserable profligacy here - a profligacy which set at defiance the laws, while it eluded the vigilance, of the institution. Three years of folly, passed without profit, had but given me rooted habits of vice, and added, in a somewhat unusual degree, to my bodily stature, when, after a week of soulless dissipation, I invited a small party of the most dissolute students to a secret carousal in my chambers. We met at a late hour of the night ; for our debaucheries were to be faithfully protracted until morning. The wine flowed freely, and there were not wanting other and perhaps more dangerous seductions; so that the gray dawn had already faintly appeared in the east while our delirious extravagance was at its height. Madly flushed with cards and intoxication, I was in the act of insisting upon a toast of more than wonted profanity, when my attention was suddenly diverted by the violent, although partial, unclosing of the door of the apartment, and by the eager voice of a servant from without. He said that some person, apparently in great haste, demanded to speak with me in the hall.

Wildly excited with wine, the unexpected interruption rather delighted than surprised me. I staggered forward at once, and a few steps brought me to the vestibule of the building. In this low and small room there hung no lamp; and now no light at all was admitted, save that of the exceedingly feeble dawn which made its way through the semi-circular window. As

I put my foot over the threshold, I became aware of the figure of a youth about my own height, and habited in a white kerseymere morning frock, cut in the novel fashion of the one I myself wore at the moment. This the faint light enabled me to perceive ; but the features of his face I could not distinguish. Upon my entering, he strode hurriedly up to me, and, seizing me by the arm with a gesture of petulant impatience, whispered the words "William Wilson!" in my ear.

I grew perfectly sober in an instant.
There was that in the manner of the stranger, and in the tremulous shake of his uplifted finger, as he held it between my eyes and the light, which filled me with unqualified amazement; but it was not this which had so violently moved me. It was the pregnancy of solemn admonition in the singular, low, hissing utterance; and, above all, it was the character, the tone, the key, of those few, simple, and familiar, yet whispered syllables, which came with a thousand thronging memories of by-gone days, and struck upon my soul with the shock of a galvanic battery. Ere I could recover the use of my senses he was gone.

Although this event failed not of a vivid effect upon my disordered imagination, yet was it evanescent as vivid. For some weeks, indeed, I busied myself in earnest inquiry, or was wrapped in a cloud of morbid speculation. I did not pretend to disguise from my perception the identity of the singular individual who thus perseveringly interfered with my affairs, and harassed me with his insinuated counsel. But who and what was this Wilson? - and whence came he? - and what were his purposes? Upon neither of these points could I be satisfied-merely ascertaining, in regard to him, that a sudden acci-
dent in his family had caused his removal from Dr. Bransby's academy on the afternoon of the day in which I myself had eloped. But in a brief period I ceased to think upon the subject, my attention being all absorbed in a contemplated departure for Oxford. Thither I soon went, the uncalculating vanity of my parents furnishing me with an outfit and annual establishment which would enable me to indulge at will in the luxury already so dear to my heart - to vie in profuseness of expenditure with the haughtiest heirs of the wealthiest earldoms in Great Britain.

Excited by such appliances to vice, my constitutional temperament broke forth with redoubled ardor, and I spurned even the common restraints of decency in the mad infatuation of my revels. But it were absurd to pause in the detail of my extravagance. Let it suffice, that among spendthrifts I out-Heroded Herod, and that, giving name to a multitude of novel follies, I added no brief appendix to the long catalogue of vices then usual in the most dissolute university of Europe.

It could hardly be credited, however, that I had, even here, so utterly fallen from the gentlemanly estate as to seek acquaintance with the vilest arts of the gambler by profession, and, having become an adept in his despicable science, to practise it habitually as a means of increasing my already enormous income at the expense of the weak-minded among my fellow-collegians. Such, nevertheless, was the fact. And the very enormity of this offence against all manly and honorable sentiment proved, beyond doubt, the main if not the sole reason of the impunity with which it was committed. Who, indeed, among my most abandoned associates, would not rather have
disputed the clearest evidence of his senses, than have suspected of such courses the gay, the frank, the generous William Wilson - the noblest and most liberal commoner at Oxford: him whose follies (said his parasites) were but the follies of youth and unbridled fancy - whose errors but inimitable whim whose darkest vice but a careless and dashing extravagance?

I had been now two years successfully busied in this way, when there came to the university a young parvenu nobleman, Glendinning - rich, said report, as Herodes Atticus - his riches, too, as easily acquired. I soon found him of weak intellect, and of course marked him as a fitting subject for my skill. I frequently engaged him in play, and contrived, with the gambler's usual art, to let him win considerable sums, the more effectually to entangle him in my snares. At length, my schemes being ripe, I met him (with the full intention that this meeting should be final and decisive) at the chambers of a fellow-commoner, (Mr. Preston) equally intimate with both, but who, to do him justice, entertained not even a remote suspicion of my design. To give to this a better coloring, I had contrived to have assembled a party of some eight or ten, and was solicitously careful that the introduction of cards should appear accidental, and originate in the proposal of my contemplated dupe himself. To be brief upon a vile topic, none of the low finesse was omitted, so customary upon similar occasions that it is a just matter for wonder how any are still found so besotted as to fall its victim.

We had protracted our sitting far into the night, and I had at length effected the manœuvre of get-
ting Glendinning as my sole antagonist. The game, too, was my favorite écarté. The rest of the company, interested in the extent of our play, had abandoned their own cards, and were standing around us as spectators. The parvenu, who had been induced, by my artifices in the early part of the evening, to drink deeply, now shuffled, dealt, or played, with a wild nervousness of manner for which his intoxication, I thought, might partially but could not altogether account. In a very short period he had become my debtor to a large amount, when, having taken a long draught of port, he did precisely what I had been coolly anticipating - he proposed to double our already extravagant stakes. With a well-feigned show of reluctance, and not until after my repeated refusal had seduced him into some angry words which gave a color of pique to my compliance, did I finally comply. The result, of course, did but prove how entirely the prey was in my toils; in less than an hour he had quadrupled his debt. For some time his countenance had been losing the florid tinge lent it by the wine; but now, to my astonishment, I perceived that it had grown to a pallor truly fearful. I say, to my astonishment. Glendinning had been represented to my eager inquiries as immeasurably wealthy ; and the sums which he had as yet lost, although in themselves vast, could not, I supposed, very seriously annoy, much less so violently affect him. That he was overcome by the wine just swallowed, was the idea which most readily presented itself; and, rather with a view to the preservation of my own character in the eyes of my associates, than from any less interested motive, I was about to insist, peremptorily, upon a discontinuance of the play, when some

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expressions at my elbow from among the company, and an ejaculation evincing utter despair on the part of Glendinning, gave me to understand that I had effected his total ruin under circumstances which, rendering him an object for the pity of all, should have protected him from the ill offices even of a fiend.

What now might have been my conduct it is difficult to say. The pitiable condition of my dupe had thrown an air of embarrassed gloom over all; and for some moments a profound silence was maintained, during which I could not help feeling my cheeks tingle with the many burning glances of scorn or reproach cast upon me by the less abandoned of the party. I will even own that an intolerable weight of anxiety was for a brief instant lifted from my bosom by the sudden and extraordinary interruption which ensued. The wide, heavy folding-doors of the apartment were all at once thrown open, to their full extent, with a vigorous and rushing impetuosity that extinguished, as if by magic, every candle in the room. Their light, in dying, enabled us just to perceive that a stranger had entered, about my own height, and closely muffled in a cloak. The darkness, however, was now total; and we could only feel that he was standing in our midst. Before any one of us could recover from the extreme astonishment into which this rudeness had thrown all, we heard the voice of the intruder.
"Gentlemen," he said, in a low, distinct, and never-to-be-forgotten whisper which thrilled to the very marrow of my bones, "gentlemen, I make no apology for this behavior, because, in thus behaving, I am but fulfilling a duty. You are, beyond doubt, uninformed of the true character of the person who has to-night won

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at écarté a large sum of money from Lord Glendinning. I will therefore put you upon an expeditious and decisive plan of obtaining this very necessary information. Please to examine, at your leisure, the inner linings of the cuff of his left sleeve, and the several little packages which may be found in the somewhat capacious pockets of his embroidered morning wrapper."

While he spoke, so profound was the stillness that one might have heard a pin drop upon the floor. In ceasing, he departed at once, and as abruptly as he had entered. Can I - shall I describe my sensations? Must I say that I felt all the horrors of the damned ? Most assuredly I had little time for reflection. Many hands roughly seized me upon the spot, and lights were immediately re-procured. A search ensued. In the lining of my sleeve were found all the court cards essential in écarté, and, in the pockets of my wrapper, a number of packs, fac-similes of those used at our sittings, with the single exception that mine were of the species called, technically, arrondis; the honors being slightly convex at the ends, the lower cards slightly convex at the sides. In this disposition, the dupe who cuts, as customary, at the length of the pack, will invariably find that he cuts his antagonist an honor; while the gambler, cutting at the breadth, will, as certainly, cut nothing for his victim which may count in the records of the game.

Any burst of indignation upon this discovery would have affected me less than the silent contempt, or the sarcastic composure, with which it was received.
"Mr. Wilson," said our host, stooping to remove from beneath his feet an exceedingly luxurious cloak of rare furs, "Mr. Wilson, this is your property."
(The weather was cold; and, upon quitting my own room, I had thrown a cloak over my dressing wrapper, putting it off upon reaching the scene of play.) "I presume it is supererogatory to seek here" (eying the folds of the garment with a bitter smile)" for any farther evidence of your skill. Indeed, we have had enough. You will see the necessity, I hope, of quitting Oxford - at all events, of quitting instantly my chambers."

Abased, humbled to the dust as I then was, it is probable that I should have resented this galling language by immediate personal violence, had not my whole attention been at the moment arrested by a fact of the most startling character. The cloak which I had worn was of a rare description of fur ; how rare, how extravagantly costly, I shall not venture to say. Its fashion, too, was of my own fantastic invention; for I was fastidious to an absurd degree of coxcombry, in matters of this frivolous nature. When, therefore, Mr. Preston reached me that which he had picked up upon the floor, and near the folding-doors of the apartment, it was with an astonishment nearly bordering upon terror, that I perceived my own already hanging on my arm, (where I had no doubt unwittingly placed it) and that the one presented me was but its exact counterpart in every, in even the minutest possible particular. The singular being who had so disastrously exposed me, had been muffled, I remembered, in a cloak; and none had been worn at all by any of the members of our party, with the exception of myself. Retaining some presence of mind, I took the one offered me by Preston; placed it, unnoticed, over my own; left the apartment with a resolute scowl of defiance ; and, next morning ere dawn of day, com-
menced a hurried journey from Oxford to the continent, in a perfect agony of horror and of shame.
$I$ fled in vain. My evil destiny pursued me as if in exultation, and proved, indeed, that the exercise of its mysterious dominion had as yet only begun. Scarcely had I set foot in Paris, ere I had fresh evidence of the detestable interest taken by this Wilson in my concerns. Years flew, while I experienced no relief. Villain! - at Rome, with how untimely, yet with how spectral an officiousness, stepped he in between me and my ambition! At Vienna, too - at Berlin - and at Moscow! Where, in truth, had I not bitter cause to curse him within my heart? From his inscrutable tyranny did I at length flee, panic-stricken, as from a pestilence ; and to the very ends of the earth $I$ fled in vain.

And again, and again, in secret communion with my own spirit, would I demand the questions, "Who is he? - whence came he? - and what are his objects?" But no answer was there found. And now I scrutinized, with a minute scrutiny, the forms, and the methods, and the leading traits of his impertinent supervision. But even here there was very little upon which to base a conjecture. It was noticeable, indeed, that, in no one of the multiplied instances in which he had of late crossed my path, had he so crossed it except to frustrate those schemes, or to disturb those actions, which, if fully carried out, might have resulted in bitter mischief. Poor justification this, in truth, for an authority so imperiously assumed! Poor indemnity for natural rights of self-agency so pertinaciously, so insultingly denied!

I had also been forced to notice that my tormentor, for a very long period of time, (while scrupulously and
with miraculous dexterity maintaining his whim of an identity of apparel with myself) had so contrived it, in the execution of his varied interference with my will, that I saw not, at any moment, the features of his face. Be Wilson what he might, this, at least, was but the veriest of affectation, or of folly. Could he, for an instant, have supposed that, in my admonisher at Eton - in the destroyer of my honor at Oxford, - in him who thwarted my ambition at Rome, my revenge at Paris, my passionate love at Naples, or what he falsely termed my avarice in Egypt, - that in this, my archenemy and evil genius, I could fail to recognize the William Wilson of my school-boy days : the namesake, the companion, the rival, the hated and dreaded rival at Dr. Bransby's? Impossible ! - but let me hasten to the last eventful scene of the drama.

Thus far I had succumbed supinely to this imperious domination. The sentiment of deep awe with which I habitually regarded the elevated character, the majestic wisdom, the apparent omnipresence and omnipotence of Wilson, added to a feeling of even terror, with which certain other traits in his nature and assumptions inspired me, had operated, hitherto, to impress me with an idea of my own utter weakness and helplessness, and to suggest an implicit, although bitterly reluctant submission to his arbitrary will. But, of late days, I had given myself up entirely to wine ; and its maddening influence upon my hereditary temper rendered me more and more impatient of control. I began to murmur, to hesitate, to resist. And was it only fancy which induced me to believe that, with the increase of my own firmness, that of my tormentor underwent a proportional diminution? Be this as it may, l now began to feel the inspiration of
a burning hope, and at length nurtured in my secret thoughts a stern and desperate resolution that I would submit no longer to be enslaved.

It was at Rome, during the Carnival of 18 -, that I attended a masquerade in the palazzo of the Neapolitan Duke Di Broglio. I had indulged more freely than usual in the excesses of the wine-table; and now the suffocating atmosphere of the crowded rooms irritated me beyond endurance. The difficulty, too, of forcing my way through the mazes of the company contributed not a little to the ruffling of my temper; for I was anxiously seeking (let me not say with what unworthy motive) the young, the gay, the beautiful wife of the aged and doting Di Broglio. With a too unscrupulous confidence she had previously communicated to me the secret of the costume in which she would be habited, and now, having caught a glimpse of her person, I was hurrying to make my way into her presence. At this moment I felt a light hand placed upon my shoulder, and that ever-remembered, low, damnable whisper within my ear.

In an absolute frenzy of wrath, I turned at once upon him who had thus interrupted me, and seized him violently by the collar. He was attired, as I had expected, in a costume altogether similar to my own; wearing a Spanish cloak of blue velvet, begirt about the waist with a crimson belt sustaining a rapier. A mask of black silk entirely covered his face.
"Scoundrel!" I said, in a voice husky with rage, while every syllable I uttered seemed as new fuel to my fury; "scoundrel ! impostor! accursed villain! you shall not - you shall not dog me unto death! Follow me, or I stab you where you stand!" - and I broke my way from the ball-room into a small ante-
chamber adjoining, dragging him unresistingly with me as I went.

Upon entering, I thrust him furiously from me. He staggered against the wall, while I closed the door with an oath, and commanded him to draw. He hesitated but for an instant ; then, with a slight sigh, drew in silence, and put himself upon his defence.

The contest was brief indeed. I was frantic with every species of wild excitement, and felt within my single arm the energy and power of a multitude. In a few seconds I forced him by sheer strength against the wainscoting, and thus, getting him at mercy, plunged my sword, with brute ferocity, repeatedly through and through his bosom.

At that instant some person tried the latch of the door. I hastened to prevent an intrusion, and then immediately returned to my dying antagonist. But what human language can adequately portray that astonishment, that horror which possessed me at the spectacle then presented to view? The brief moment in which I averted my eyes had been sufficient to produce, apparently, a material change in the arrangements at the upper or farther end of the room. A large mirror - so at first it seemed to me in my confusion - now stood where none had been perceptible before; and, as I stepped up to it in extremity of terror, mine own image, but with features all pale and dabbled in blood, advanced to meet me with a feeble and tottering gait.

Thus it appeared, I say, but was not. It was my antagonist - it was Wilson, who then stood before me in the agonies of his dissolution. His mask and cloak lay, where he had thrown them, upon the floor. Not a thread in all his raiment - not a line in all the

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marked and singular lineaments of his face which was not, even in the most absolute identity, mine own!

It was Wilson; but he spoke no longer in a whisper, and I could have fancied that I myself was speaking while he said:-
"You have conquered, and I yield. Yet, henceforward art thou also dead-dead to the World, to Heaven and to Hope! In me didst thou exist and, in my death, see by this image, which is thine own, how utterly thou hast murdered thyself."

## THE IMP OF THE PERVERSE

IN the consideration of the faculties and impulses of the prima mobilia of the human soul, the phrenologists have failed to make room for a propensity which, although obviously existing as a radical, primitive, irreducible sentiment, has been equally overlooked by all the moralists who have preceded them. In the pure arrogance of the reason, we have all overlooked it. We have suffered its existence to escape our senses, solely through want of belief, - of faith, - whether it be faith in Revelation, or faith in the Kabbala. The idea of it has never occurred to us, simply because of its supererogation. We saw no need of the impulse -for the propensity. We could not perceive its necessity. We could not understand, that is to say, we could not have understood, had the notion of this primum mobile ever obtruded itself; we could not have understood in what manner it might be made to further the objects of humanity, either temporal or eternal. It cannot be denied that phrenology, and in great measure, all metaphysicianism, have been concocted a priori. The intellectual or logical man, rather than the understanding or observant man, set himself to imagine designs - to dictate purposes to God. Having thus fathomed to his satisfaction the intentions of Jehovah, out of these intentions he built his innumerable systems of mind. In the matter of

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phrenology, for example, we first determined, naturally enough, that it was the design of the Deity that man should eat. We then assigned to man an organ of alimentiveness, and this organ is the scourge with which the Deity compels man, will-I nill-I, into eating. Secondly, having settled it to be God's will that man should continue his species, we discovered an organ of amativeness, forthwith. And so with combativeness, with ideality, with causality, with constructiveness, - so, in short, with every organ, whether representing a propensity, a moral sentiment, or a faculty of the pure intellect. And in these arrangements of the principia of human action, the Spurzheimites, whether right or wrong, in part, or upon the whole, have but followed in principle the footsteps of their predecessors; deducing and establishing everything from the preconceived destiny of man, and upon the ground of the objects of his Creator.

It would have been wiser, it would have been safer, to classify (if classify we must) upon the basis of what man usually or occasionally did, and was always occasionally doing, rather than upon the basis of what we took it for granted the Deity intended him to do. If we cannot comprehend God in his visible works, how then in his inconceivable thoughts, that call the works into being? If we cannot understand him in his objective creatures, how then in his substantive moods and phases of creation?

Induction, a posteriori, would have brought phrenology to admit, as an innate and primitive principle of human action, a paradoxical something, which we may call perverseness, for want of a more characteristic term. In the sense I intend, it is, in fact, a mobile without motive, a motive not motivirt. Through its
promptings we act without comprehensible object; or, if this shall be understood as a contradiction in terms, we may so far modify the proposition as to say that through its promptings we act for the reason that we should not. In theory, no reason can be more unreasonable; but, in fact, there is none more strong. With certain minds, under certain conditions, it becomes absolutely irresistible. I am not more certain that I breathe than that the assurance of the wrong or error of any action is often the one unconquerable force which impels us, and alone impels us, to its prosecution. Nor will this overwhelming tendency to do wrong for the wrong's sake admit of analysis, or resolution into ulterior elements. It is a radical, a primitive impulse - elementary. It will be said, I am aware, that when we persist in acts because we feel we should not persist in them, our conduct is but a modification of that which ordinarily springs from the combativeness of phrenology. But a glance will show the fallacy of this idea. The phrenological combativeness has, for its essence, the necessity of selfdefence. It is our safeguard against injury. Its principle regards our well-being ; and thus the desire to be well is excited simultaneously with its development. It follows, that the desire to be well must be excited simultaneously with any principle which shall be merely a modification of combativeness, but in the case of that something which I term perverseness, the desire to be well is not only not aroused, but a strongly antagonistical sentiment exists.

An appeal to one's own heart is, after all, the best reply to the sophistry just noticed. No one who trustingly consults and thoroughly questions his own soul will be disposed to deny the entire radicalness of the
propensity in question. It is not more incomprehensible than distinctive. There lives no man who at some period has not been tormented, for example, by an earnest desire to tantalize a listener by circumlocution. The speaker is aware that he displeases; he has every intention to please; he is usually curt, precise, and clear; the most laconic and luminous language is struggling for utterance upon his tongue; it is only with difficulty that he restrains himself from giving it flow; he dreads and deprecates the anger of him whom he addresses; yet, the thought strikes him, that by certain involutions and parentheses this anger may be engendered. That single thought is enough. The impulse increases to a wish, the wish to a desire, the desire to an uncontrollable longing, and the longing (to the deep regret and mortification of the speaker, and in defiance of all consequences) is indulged.

We have a task before us which must be speedily performed. We know that it will be ruinous to make delay. The most important crisis of our life calls, trumpet-tongued, for immediate energy and action. We glow, we are consumed with eagerness to commence the work, with the anticipation of whose glorious result our whole souls are on fire. It must, it shall be undertaken to-day, and yet we put it off until to-morrow; and why? There is no answer, except that we feel perverse, using the word with no comprehension of the principle. To-morrow arrives, and with it a more impatient anxiety to do our duty, but with this very increase of anxiety arrives, also, a nameless, a positively fearful, because unfathomable craving for delay. This craving gathers strength as the moments fly. The last hour for action is at hand.

We tremble with the violence of the conflict within us, of the definite with the indefinite, of the substance with the shadow. But, if the contest have proceeded thus far, it is the shadow which prevails, - we struggle in vain. The clock strikes, and is the knell of our welfare. At the same time, it is the chanticleer-note to the ghost that has so long overawed us. It flies it disappears - we are free. The old energy returns. We will labor now. Alas, it is too late!
We stand upon the brink of a precipice. We peer into the abyss - we grow sick and dizzy. Our first impulse is to shrink from the danger. Unaccountably we remain. By slow degrees our sickness, and dizziness, and horror, become merged in a cloud of unnamable feeling. By gradations, still more imperceptible, this cloud assumes shape, as did the vapor from the bottle out of which arose the Genius in the "Arabian Nights." But out of this our cloud upon the precipice's edge, there grows into palpability a shape, far more terrible than any Genius, or any demon of a tale, and yet it is but a thought, although a fearful one, and one which chills the very marrow of our bones with the fierceness of the delight of its horror. It is merely the idea of what would be our sensations during the sweeping precipitancy of a fall from such a height. And this fall, this rushing annihilation, for the very reason that it involves that one most ghastly and loathsome of all the most ghastly and loathsome images of death and suffering which have ever presented themselves to our imagination - for this very cause do we now the most vividly desire it. And because our reason violently deters us from the brink, therefore, do we the more impetuously approach it. There is no passion in nature so demoniacally impa-
tient, as that of him who, shuddering upon the edge of a precipice, thus meditates a plunge. To indulge for a moment in any attempt at thought is to be inevitably lost; for reflection but urges us to forbear, and therefore it is, I say, that we cannot. If there be no friendly arm to check us, or if we fail in a sudden effort to prostrate ourselves backward from the abyss, we plunge, and are destroyed.

Examine these and similar actions as we will, we shall find them resulting solely from the spirit of the Perverse. We perpetrate them merely because we feel that we should not. Beyond or behind this, there is no intelligible principle; and we might, indeed, deem this perverseness a direct instigation of the Arch-Fiend, were it not occasionally known to operate in furtherance of good.

I have said thus much, that in some measure I may answer your question; that I may explain to you why I am here; that I may assign to you something that shall have at least the faint aspect of a cause for my wearing these fetters, and for my tenanting this cell of the condemned. Had I not been thus prolix, you might either have misunderstood me altogether, or, with the rabble, have fancied me mad. As it is, you will easily perceive that I am one of the many uncounted victims of the Imp of the Perverse.

It is impossible that any deed could have been wrought with a more thorough deliberation. For weeks, for months, I pondered upon the means of the murder. I rejected a thousand schemes, because their accomplishment involved a chance of detection. At length, in reading some French memoirs, I found an account of a nearly fatal illness that occurred to Madame Pilau, through the agency of a candle acci-
dentally poisoned. The idea struck my fancy at once. I knew my victim's habit of reading in bed. I knew, too, that his apartment was narrow and ill-ventilated. But I need not vex you with impertinent details. I need not describe the easy artifices by which I substituted, in his bedroom candle-stand, a wax-light of my own making, for the one which I there found. The next morning he was discovered dead in his bed, and the coroner's verdict was, - "Death by the visitation of God."

Having inherited his estate, all went well with me for years. The idea of detection never once entered my brain. Of the remains of the fatal taper I had myself carefully disposed. I had left no shadow of a clew by which it would be possible to convict, or even to suspect me of the crime. It is inconceivable how rich a sentiment of satisfaction arose in my bosom as I reflected upon my absolute security. For a very long period of time, I was accustomed to revel in this sentiment. It afforded me more real delight than all the mere worldly advantages accruing from my sin. But there arrived at length an epoch, from which the pleasurable feeling grew, by scarcely perceptible gradations, into a haunting and harassing thought. It harassed because it haunted. I could scarcely get rid of it for an instant. It is quite a common thing to be thus annoyed with the ringing in our ears, or rather in our memories, of the burden of some ordinary song, or some unimpressive snatches from an opera. Nor will we be the less tormented if the song in itself be good, or the opera air meritorious. In this manner, at last, I would perpetually catch myself pondering upon my security, and repeating, in a low undertone, the phrase, "I am safe."

One day, whilst sauntering along the streets, I arrested myself in the act of murmuring, half aloud, these customary syllables. In a fit of petulance, I remodelled them thus:-"I am safe -I am safe - yes - if I be not fool enough to make open confession!"

No sooner had I spoken these words than I felt an icy chill creep to my heart. I had had some experience in these fits of perversity, (whose nature I have been at some trouble to explain,) and I remembered well that, in no instance, I had successfully resisted their attacks. And now my own casual self-suggestion, that I might possibly be fool enough to confess the murder of which I had been guilty, confronted me, as if the very ghost of him whom I had murdered - and beckoned me on to death.

At first, I made an effort to shake off this nightmare of the soul. I walked vigorously - faster still faster - at length I ran. I felt a maddening desire to shriek aloud. Every succeeding wave of thought overwhelmed me with new terror, for, alas! I well, too well understood that to think, in my situation, was to be lost. I still quickened my pace. I bounded like a madman through the crowded thoroughfares. At length, the populace took the alarm, and pursued me. I felt then the consummation of my fate. Could I have torn out my tongue, I would have done it - but a rough voice resounded in my ears - a rougher grasp seized me by the shoulder. I turned - I gasped for breath. For a moment, I experienced all the pangs of suffocation; I became blind, and deaf, and giddy; and then, some invisible fiend, I thought, struck me with his broad palm upon the back. The long-imprisoned secret burst forth from my soul.

They say that I spoke with a distinct enunciation, but with marked emphasis and passionate hurry, as if in dread of interruption before concluding the brief but pregnant sentences that consigned me to the hangman and to hell.

Having related all that was necessary for the fullest judicial conviction, I fell prostrate in a swoon.

But why shall I say more? To-day I wear these chains, and am here! To-morrow I shall be fetterless! -but where?

## THE BLACK CAT

For the most wild, yet most homely narrative which I am about to pen, I neither expect nor solicit belief. Mad indeed would I be to expect it, in a case where my very senses reject their own evidence. Yet, mad am I not - and very surely do I not dream. But tomorrow I die, and to-day I would unburden my soul. My immediate purpose is to place before the world, plainly, succinctly, and without comment, a series of mere household events. In their consequences, these events have terrified - have tortured - have destroyed me. Yet I will not attempt to expound them. To me, they have presented little but Horror; to many they will seem less terrible than baroques. Hereafter, perhaps, some intellect may be found which will reduce my phantasm to the common-place: some intellect more calm, more logical, and far less excitable than my own, which will perceive, in the circumstances I detail with awe, nothing more than an ordinary succession of very natural causes and effects.

From my infancy I was noted for the docility and humanity of my disposition. My tenderness of heart was even so conspicuous as to make me the jest of my companions. I was especially fond of animals, and was indulged by my parents with a great variety of pets. With these I spent most of my time, and
never was so happy as when feeding and caressing them. This peculiarity of character grew with my growth, and in my manhood I derived from it one of my principal sources of pleasure. To those who have cherished an affection for a faithful and sagacious dog, I need hardly be at the trouble of explaining the nature or the intensity of the gratification thus derivable. There is something in the unselfish and self-sacrificing love of a brute which goes directly to the heart of him who has had frequent occasion to test the paltry friendship and gossamer fidelity of mere Man.

I married early, and was happy to find in my wife a disposition not uncongenial with my own. Observing my partiality for domestic pets, she lost no opportunity of procuring those of the most agreeable kind. We had birds, gold-fish, a fine dog, rabbits, a small monkey, and a cat.

This latter was a remarkably large and beautiful animal, entirely black, and sagacious to an astonishing degree. In speaking of his intelligence, my wife, who at heart was not a little tinctured with superstition, made frequent allusion to the ancient popular notion which regarded all black cats as witches in disguise. Not that she was ever serious upon this point - and I mention the matter at all for no better reason than that it happens, just now, to be remembered.

Pluto - this was the cat's name - was my favorite pet and playmate. I alone fed him, and he attended me wherever I went about the house. It was even with difficulty that I could prevent him from following me through the streets.

Our friendship lasted, in this manner, for several years, during which my general temperament and
character, through the instrumentality of the Fiend Intemperance, had (I blush to confess it) experienced a radical alteration for the worse. I grew, day by day, more moody, more irritable, more regardless of the feelings of others. I suffered myself to use intemperate language to my wife. At length, I even offered her personal violence. My pets, of course, were made to feel the change in my disposition. I not only neglected, but ill-used them. For Pluto, however, I still retained sufficient regard to restrain me from maltreating him, as I made no scruple of maltreating the rabbits, the monkey, or even the dog, when by accident, or through affection, they came in my way. But my disease grew upon me - for what disease is like Alcohol!-and at length even Pluto, who was now becoming old, and consequently somewhat peevish - even Pluto began to experience the effects of my ill-temper.

One night, returning home, much intoxicated, from one of my haunts about town I fancied that the cat avoided my presence. I seized him; when, in his fright at my violence, he inflicted a slight wound upon my hand with his teeth. The fury of a demon instantly possessed me. I knew myself no longer. My original soul seemed, at once, to take its flight from my body; and a more than fiendish malevolence, gin-nurtured, thrilled every fibre of my frame. I took from my waistcoat-pocket a pen-knife, opened it, grasped the poor beast by the throat, and deliberately cut one of its eyes from the socket! I blush, I burn, I shudder, while I pen the damnable atrocity.

When reason returned with the morning - when I had slept off the fumes of the night's debauch - I experienced a sentiment half of horror, half of remorse,
for the crime of which I had been guilty; but it was, at best, a feeble and equivocal feeling, and the soul remained untouched. I again plunged into excess, and soon drowned in wine all memory of the deed.

In the mean time the cat slowly recovered. The socket of the lost eye presented, it is true, a frightful appearance, but he no longer appeared to suffer any pain. He went about the house as usual, but, as might be expected, fled in extreme terror at my approach. I had so much of my old heart left, as to be at first grieved by this evident dislike on the part of a creature which had once so loved me. But this feeling soon gave place to irritation. And then came, as if to my final and irrevocable overthrow, the spirit of Perverseness. Of this spirit philosophy takes no account. Yet I am not more sure that my soul lives than I am that perverseness is one of the primitive impulses of the human heart: one of the indivisible primary faculties, or sentiments, which give direction to the character of Man. Who has not, a bundred times, found himself committing a vile or a silly action, for no other reason than because he knows he should not? Have we not a perpetual inclination, in the teeth of our best judgment, to violate that which is Law, merely because we understand it to be such ? This spirit of perverseness, I say, came to my final overthrow. It was this unfathomable longing of the soul to vex itself - to offer violence to its own nature - to do wrong for the wrong's sake only - that urged me to continue and finally to consummate the injury I had inflicted upon the unoffending brute. One morning, in cool blood, I slipped a noose about its neck and hung it to the limb of a tree; hung it with the tears streaming from my eyes, and with the bit-
terest remorse at my heart; hung it because I knew that it had loved me, and because I felt it had given me no reason of offence; hung it because I knew that in so doing I was committing a sin - a deadly sin that would so jeopardize my immortal soul as to place it, if such a thing were possible, even beyond the reach of the infinite mercy of the Most Merciful and Most Terrible God.

On the night of the day on which this cruel deed was done, I was aroused from sleep by the cry of fire. The curtains of my bed were in flames. The whole house was blazing. It was with great difficulty that my wife, a servant, and myself, made our escape from the conflagration. The destruction was complete. My entire worldly wealth was swallowed up, and I resigned myself thenceforward to despair.

I am above the weakness of seeking to establish a sequence of cause and effect, between the disaster and the atrocity. But I am detailing a chain of facts, and wish not to leave even a possible link imperfect. On the day succeeding the fire, I visited the ruins. The walls, with one exception, had fallen in. This exception was found in a compartment wall, not very thick, which stood about the middle of the house, and against which had rested the head of my bed. The plastering had here, in great measure, resisted the action of the fire - a fact which I attributed to its having been recently spread. About this wall a dense crowd were collected, and many persons seemed to be examining a particular portion of it with very minute and eager attention. The words "strange!" "singular!" and other similar expressions, excited my curiosity. I approached and saw, as if graven in bas relief upon the white surface, the figure of a gigantic
cat. The impression was given with an accuracy truly marvellous. There was a rope about the animal's neck.

When I first beheld this apparition - for I could scarcely regard it as less - my wonder and my terror were extreme. But at length reflection came to my aid. The cat, I remembered, had been hung in a garden adjacent to the house. Upon the alarm of fire, this garden had been immediately filled by the crowd - by some one of whom the animal must have been cut from the tree and thrown, through an open window, into my chamber. This had probably been done with the view of arousing me from sleep. The falling of other walls had compressed the victim of my cruelty into the substance of the freshly-spread plaster; the lime of which, with the flames, and the ammonia from the carcass, had then accomplished the portraiture as I saw it.

Although I thus readily accounted to my reason, if not altogether to my conscience, for the startling fact just detailed, it did not the less fail to make a deep impression upon my fancy. For months I could not rid myself of the phantasm of the cat; and during this period there came back into my spirit a halfsentiment that seemed, but was not, remorse. I went so far as to regret the loss of the animal, and to look about me, among the vile haunts which I now habitually frequented, for another pet of the same species, and of somewhat similar appearance, with which to supply its place.

One night as I sat, half stupefied, in a den of more than infamy, my attention was suddenly drawn to some black object, reposing upon the head of one of the immense hogsheads of Gin, or of Rum, which
constituted the chief furniture of the apartment. I had been looking steadily at the top of this hogshead for some minutes, and what now caused me surprise was the fact that I had not sooner perceived the object thereupon. I approached it, and touched it with my hand. It was a black cat - a very large one - fully as large as Pluto, and closely resembling him in every respect but one. Pluto had not a white hair upon any portion of his body; but this cat had a large, although indefinite splotch of white, covering nearly the whole region of the breast.

Upon my touching him, he immediately arose, purred loudly, rubbed against my hand, and appeared delighted with my notice. This, then, was the very creature of which I was in search. I at once offered to purchase it of the landlord; but this person made no claim to it - knew nothing of it - had never seen it before.

I continued my caresses, and, when I prepared to go home, the animal evinced a disposition to accompany me. I permitted it to do so; occasionally stooping and patting it as I proceeded. When it reached the house, it domesticated itself at once, and became immediately a great favorite with my wife.

For my own part, I soon found a dislike to it arising within me. This was just the reverse of what I had anticipated; but - I know not how or why it was - its evident fondness for myself rather disgusted and annoyed. By slow degrees, these feelings of disgust and annoyance rose into the bitterness of hatred, I avoided the creature; a certain sense of shame, and the remembrance of my former deed of cruelty, preventing me from physically abusing it. I did not, for some weeks, strike, or otherwise violently ill use it ;
but gradually - very gradually - I came to look upon it with unutterable loathing, and to flee silently from its odious presence, as from the breath of a pestilence.

What added, no doubt, to my hatred of the beast, was the discovery, on the morning after I brought it home, that, like Pluto, it also had been deprived of one of its eyes. This circumstance, however, only' endeared it to my wife, who, as I have already said, possessed, in a high degree, that humanity of feeling which had once been my distinguishing trait, and the source of many of my simplest and purest pleasures.

With my aversion to this cat, however, its partiality for myself seemed to increase. It followed my footsteps with a pertinacity which it would be difficult to make the reader comprehend. Whenever I sat, it would crouch beneath my chair, or spring upon my knees, covering me with its loathsome caresses. If I arose to walk, it would get between my feet and thus nearly throw me down, or, fastening its long and sharp claws in my dress, clamber, in this manner, to my breast. At such times, although I longed to destroy it with a blow, I was yet withheld from so doing, partly by a memory of my former crime, but chiefly - let me confess it at once - by absolute dread of the beast.

This dread was not exactly a dread of physical evil - and yet I should be at a loss how otherwise to define it. I am almost ashamed to own - yes, even in this felon's cell, I am almost ashamed to own - that the terror and horror with which the animal inspired me, had been heightened by one of the merest chimeras it would be possible to conceive. My wife had called my attention, more than once, to the character of the mark of white hair, of which I have spoken, and which constituted the sole visible difference be-

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tween the strange beast and the one I had destroyed. The reader will remember that this mark, although large, had been originally very indefinite; but, by slow degrees - degrees nearly imperceptible, and which for a long time my Reason struggled to reject as fanciful - it had, at length, assumed a rigorous distinctness of outline. It was now the representation of an object that I shudder to name; and for this, above all, I loathed, and dreaded, and would have rid myself of the monster had I dared; it was now, I say, the image of a hideous - of a ghastly thing - of the GalLows ! - oh, mournful and terrible engine of Horror and of Crime, of Agony and of Death!

And now was I indeed wretched beyond the wretchedness of mere Humanity. And a brute beast - whose fellow I had contemptuously destroyed - a brute beast to work out for me - for me a man, fashioned in the image of the High God - so much of insufferable woe! Alas! neither by day nor by night knew I the blessing of Rest any more! During the former the creature left me no moment alone; and, in the latter, I started, hourly, from dreams of unutterable fear, to find the hot breath of the thing upon my face, and its vast weight - an incarnate Night-Mare that I had no power to shake off - incumbent eternally upon my heart!

Beneath the pressure of torments such as these, the feeble remnant of the good within me succumbed. Evil thoughts became my sole intimates - the darkest and most evil of thoughts. The moodiness of my usual temper increased to hatred of all things and of all mankind; while, from the sudden, frequent, and ungovernable outbursts of a fury to which I now blindly abandoned myself, my uncomplaining wife,
alas ! was the most usual and the most patient of sufferers.

One day she accompanied me, upon some household errand, into the cellar of the old building which our poverty compelled us to inhabit. The cat followed me down the steep stairs, and, nearly throwing me headlong, exasperated me to madness. Uplifting an axe, and forgetting, in my wrath, the childish dread which had hitherto stayed my hand, I aimed a blow at the animal which, of course, would have proved instantly fatal had it descended as I wished. But this blow was arrested by the hand of my wife. Goaded, by the interference, into a rage more than demoniacal, I withdrew my arm from her grasp and buried the axe in her brain. She fell dead upon the spot, without a groan.

This hideous murder accomplished, I set myself forthwith, and with entire deliberation, to the task of concealing the body. I knew that I could not remove it from the house, either by day or by night, without the risk of being observed by the neighbors. Many projects entered my mind. At one period I thought of cutting the corpse into minute fragments, and destroying them by fire. At another, I resolved to dig a grave for it in the floor of the cellar. Again, I deliberated about casting it in the well in the yard - about packing it in a box, as if merchandise, with the usual arrangements, and so getting a porter to take it from the house. Finally I hit upon what I considered a far better expedient than either of these. I determined to wall it up in the cellar - as the monks of the middle ages are recorded to have walled up their victims.

For a purpose such as this the cellar was well
adapied. Its walls were loosely constructed, and had lately been plastered throughout with a rough plaster, which the dampness of the atmosphere had prevented from hardening. Moreover, in one of the walls was a projection, caused by a false chimney, or fireplace, that had been filled up, and made to resemble the rest of the cellar. I made no doubt that I could readily displace the bricks at this point, insert the corpse, and wall the whole up as before, so that no eye could detect anything suspicious.

And in this calculation I was not deceived. By means of a crow-bar I easily dislodged the bricks, and, having carefully deposited the body against the inner wall, I propped it in that position, while, with little trouble, I re-laid the whole structure as it originally stood. Having procured mortar, sand, and hair, with every possible precaution, I prepared a plaster which could not be distinguished from the old, and with this I very carefully went over the new brick-work. When I had finished, I felt satisfied that all was right. The wall did not present the slightest appearance of having been disturbed. The rubbish on the floor was picked up with the minutest care. I looked around triumphantly, and said to myself - "Here at least, then, my labor has not been in vain."

My next step was to look for the beast which had been the cause of so much wretchedness; for I had, at length, firmly resolved to put it to death. Had I been able to meet with it, at the moment, there could have been no doubt of its fate; but it appeared that the crafty animal had been alarmed at the violence of my previous anger, and forbore to present itself in my present mood. It is impossible to describe, or to imagine, the deep, the blissful sense of relief which
the absence of the detested creature occasioned in my bosom. It did not make its appearance during the night - and thus for one night at least, since its introduction into the house, I soundly and tranquilly slept; ay, slept even with the burden of murder upon my soul!

The second and the third day passed, and still my tormentor came not. Once again I breathed as a free man. The monster, in terror, had fled the premises forever! I should behold it no more! My happiness was supreme! The guilt of my dark deed disturbed me but little. Some few inquiries had been made, but these had been readily answered. Even a search had been instituted - but of course nothing was to be discovered. I looked upon my future felicity as secured.

Upon the fourth day of the assassination, a party of the police came, very unexpectedly, into the house, and proceeded again to make rigorous investigation of the premises. Secure, however, in the inscrutability of my place of concealment, I felt no embarrassment whatever. The officers bade me accompany them in their search. They left no nook or corner unexplored. At length, for the third or fourth time, they descended into the cellar. I quivered not in a muscle. My heart beat calmly as that of one who slumbers in innocence. I walked the cellar from end to end. I folded my arms upon my bosom, and roamed easily to and fro. The police were thoroughly satisfied and prepared to depart. The glee at my heart was too strong to be restrained. I burned to say if but one word, by way of triumph, and to render doubly sure their assurance of my guiltlessness.
"Gentlemen," I said at last, as the party ascended the steps, "I delight to have allayed your suspicions.

I wish you all health, and a little more courtesy. By the bye, gentlemen, this - this is a very well constructed house." (In the rabid desire to say something easily, I scarcely knew what I uttered at all) "I may say an excellently well constructed house. These walls - are you going, gentlemen? - these walls are solidly put together; " and here, through the mere frenzy of bravado, I rapped heavily, with a cane which I held in my hand, upon that very portion of the brick-work behind which stood the corpse of the wife of my bosom.

But may God shield and deliver me from the fangs of the Arch-Fiend! No sooner had the reverberation of my blows sunk into silence, than I was answered by a voice from within the tomb! - by a cry, at first muffled and broken, like the sobbing of a child, and then quickly swelling into one long, loud, and continuous scream, utterly anomalous and inhuman - a howl - a wailing shriek, half of horror and half of triumph, such as might have arisen only out of hell, conjointly from the throats of the damned in their agony and of the demons that exult in the damnation.

Of my own thoughts it is folly to speak. Swooning, I staggered to the opposite wall. For one instant the party upon the stairs remained motionless, through extremity of terror and of awe. In the next, a dozen stout arms were toiling at the wall. It fell bodily. The corpse, already greatly decayed and clotted with gore, stood erect before the eyes of the spectators. Upon its head, with red extended mouth and solitary eye of fire, sat the hideous beast whose craft had seduced me into murder, and whose informing voice had consigned me to the hangman. I had walled the monster up within the tomb!

## THE TELL-TALE HEART

TruE! - nervous - very, very dreadfully nervous I had been and am; but why will you say that I am mad? The disease had sharpened my senses not destroyed - not dulled them. Above all was the sense of hearing acute. I heard all things in the heaven and in the earth. I heard many things in hell. How, then, am I mad? Hearken! and observe how healthily - how calmly I can tell you the whole story.

It is impossible to say how first the idea entered my brain; but once conceived, it haunted me day and night. Object there was none. Passion there was none. I loved the old man. He had never wronged me. He had never given me insult. For his gold I had no desire. I think it was his eye! yes, it was this! One of his eyes resembled that of a vulture a pale blue eye, with a film over it. Whenever it fell upon me, my blood ran cold ; and so by degrees - very gradually - I made up my mind to take the life of the old man, and thus rid myself of the eye forever.

Now this is the point. You fancy me mad. Madmen know nothing. But you should have seen me. You should have seen how wisely I proceeded - with what caution - with what foresight - with what dissimulation I went to work! I was never kinder to the
old man than during the whole week before I killed him. And every night, about midnight, I turned the latch of his door and opened it - oh, so gently! And then, when I had made an opening sufficient for my head, I put in a dark lantern, all closed, closed, so that no light shone out, and then I thrust in my head. Oh, you would have laughed to see how cunningly I thrust it in! I moved it slowly - very, very slowly, so that I might not disturb the old man's sleep. It took me an hour to place my whole head within the opening so far that I could see him as he lay upon his bed. Ha! - would a madman have been so wise as this? And then, when my head was well in the room, I undid the lantern cautiously - oh, so cautiously cautiously (for the hinges creaked) - I undid it just so much that a single thin ray fell upon the vulture eye. And this I did for seven long nights - every night just at midnight - but I found the eye always closed; and so it was impossible to do the work; for it was not the old man who vexed me, but his Evil Eye. And every morning, when the day broke, I went boldly into the chamber, and spoke courageously to him, calling him by name in a hearty tone, and inquiring how he had passed the night. So you see he would have been a very profound old man, indeed, to suspect that every night, just at twelve, I looked in upon him while he slept.

Upon the eighth night I was more than usually cautious in opening the door. A watch's minute-hand moves more quickly than did mine. Never before that night had I felt the extent of my own powers -of my sagacity. I could scarcely contain my feelings of triumph. To think that there I was, opening the door, little by little, and he not even to dream of my
secret deeds or thoughts. I fairly chuckled at the idea; and perhaps he heard me; for he moved on the bed suddenly, as if startled. Now you may think that I drew back - but no. His room was as black as pitch with the thick darkness, (for the shutters were close fastened through fear of robbers) and so I knew that he could not see the opening of the door, and I kept pushing it on steadily, steadily.

I had my head in, and was about to open the lantern, when my thumb slipped upon the tin fastening, and the old man sprang up in the bed, crying out-"Who's there?"

I kept quite still and said nothing. For a whole hour I did not move a muscle, and in the mean time I did not hear him lie down. He was still sitting up in the bed, listening : just as I have done, night after night, hearkening to the death-watches in the wall.

Presently I heard a slight groan, and I knew it was the groan of mortal terror. It was not a groan of pain or of grief-oh, no!-it was the low stifled sound that arises from the bottom of the soul when overcharged with awe. I knew the sound well. Many a night, just at midnight, when all the world slept, it has welled up from my own bosom, deepening, with its dreadful echo, the terrors that distracted me. I say I knew it well. I knew what the old man felt, and pitied him, although I chuckled at heart. I knew that he had been lying awake ever since the first slight noise, when he had turned in the bed. His fears had been ever since growing upon him. He had been trying to fancy them causeless, but could not. He had been saying to himself - "It is nothing but the wind in the chimney - it is only a mouse crossing the floor," or "it is merely a cricket which
has made a single chirp." Yes, he had been trying to comfort himself with these suppositions; but he had found all in vain. All in vain; because Death, in approaching him, had stalked with his black shadow before him, and enveloped the victim. And it was the mournful influence of the unperceived shadow that caused him to feel - although he neither sav nor heard - to feel the presence of my head within the room.

When I had waited a long time, very patiently, without hearing him lie down, I resolved to open a little - a very, very little crevice in the lantern. So I opened it - you cannot imagine how stealthily, stealthily - until, at length, a single dim ray, like the thread of the spider, shot from out the crevice and fell upon the vulture eye.

It was open - wide, wide open - and I grew furious as I gazed upon it. I saw it with perfect distinctness - all a dull blue, with a hideous veil over it that chilled the very marrow in my bones; but I could see nothing else of the old man's face or person: for I had directed the ray as if by instinct, precisely upon the damned spot.

And now have I not told you that what you mistake for madness is but over acuteness of the senses? now, I say, there came to my ears a low, dull, quick sound, much such a sound as a watch makes when enveloped in cotton. I knew that sound well, too. It was the beating of the old man's heart. It increased my fury, as the beating of a drum stimulates the soldier into courage.

But even yet I refrained and kept still. I scarcely breathed. I held the lantern motionless. I tried how steadily I could maintain the ray upon the eye. Meantime the hellish tattoo of the heart increased. It
grew quicker and quicker, and louder and louder every instant. The old man's terror must have been extreme! It grew louder, I say, louder every moment ! - do you mark me well ? I have told you that I am nervous; so I am. And now at the dead hour of the night, amid the dreadful silence of that old house, so strange a noise as this excited me to uncontrollable terror. Yet, for some minutes longer I refrained and stood still. But the beating grew louder, louder! I thought the heart must burst. And now a new anxiety seized me - the sound would be heard by a neighbor! The old man's hour had come! With a loud yell, I threw open the lantern and leaped into the room. He shrieked once - once only. In an instant I dragged him to the floor, and pulled the heavy bed over him. I then smiled gayly, to find the deed so far done. But, for many minutes, the heart beat on with a muffled sound. This, however, did not vex me; it would not be heard through the wall. At length it ceased. The old man was dead. I removed the bed and examined the corpse. Yes, he was stone, stone dead. I placed my hand upon the heart and held it there many minutes. There was no pulsation. He was stone dead. His eye would trouble me no more.

If still you think me mad, you will think so no longer when I describe the wise precautions I took for the concealment of the body. The night waned, and I worked hastily, but in silence. First of all I dismembered the corpse. I cut off the head and the arms and the legs.

I then took up three planks from the flooring of the chamber, and deposited all between the scantlings. I then replaced the boards so cleverly, so cunningly,
that no human eye - not even his - could have detected anything wrong. There was nothing to wash out - no stain of any kind - no blood-spot whatever. I had been too wary for that. A tub had caught all -ha! ha!

When I had made an end of these labors, it was four o`clock - still dark as midnight. As the bell sounded the hour, there came a knocking at the street door. I went down to open it with a light heart, for what had I now to fear? There entered three men, who introduced themselves, with perfect suavity, as officers of the police. A shriek had been heard by a neighbor during the night; suspicion of foul play had been aroused; information had been lodged at the police office, and they (the officers) had been deputed to search the premises.

I smiled, - for what had I to fear? I bade the gentlemen welcome. The shriek, I said, was my own in a dream. The old man, I mentioned, was absent in the country. I took my visitors all over the house. I bade them search - search well. I led them, at length, to his chamber. I showed them his treasures, secure, undisturbed. In the enthusiasm of my confidence, I brought chairs into the room, and desired them here to rest from their fatigues, while I myself, in the wild audacity of my perfect triumph, placed my own seat upon the very spot beneath which reposed the corpse of the victim.

The officers were satisfied. My manner had convinced them. I was singularly at ease. They sat, and while I answered cheerily, they chatted of familiar things. But, ere long, I felt myself getting pale and wished them gone. My head ached, and I fancied a ringing in my ears: but still they sat and still chatted.

The ringing became more distinct: it continued and became more distinct: I talked more freely to get rid of the feeling: but it continued and gained definitiveness - until, at length, I found that the noise was not within my ears.

No doubt I now grew very pale ; but I talked more fluently, and with a heightened voice. Yet the sound increased - and what could I do? It was a low, dull, quick sound - much such a sound as a watch makes when enveloped in cotton. I gasped for breath - and yet the officers heard it not. I talked more quickly - more vehemently; but the noise steadily increased. I arose and argued about trifles, in a high key, and with violent gesticulations; but the noise steadily increased. Why would they not be gone? I paced the floor to and fro with heavy strides, as if excited to fury by the observations of the men - but the noise steadily increased. Oh God! what could I do? I foamed - I raved - I swore! I swung the chair upon which I had been sitting, and grated it upon the boards, but the noise arose over all and continually increased. It grew louder - louder - louder! And still the men chatted pleasantly, and smiled. Was it possible they heard not? Almighty God!-no, no! They heard! - they suspected! - they kneru! - they were making a mockery of my horror ! - this I thought, and this I think. But anything was better than this agony! Anything was more tolerable than this derision! I could bear those hypocritical smiles no longer! I felt that I must scream or die! - and now -again! - hark! louder! louder! louder! louder! "Villains!" I shrieked, "dissemble no more! I admit the deed! - tear up the planks!-here, here! - it is the beating of his hideous heart!"

## THE MAN OF THE CROWD

Ce grand malheur, de ne pouvoir être seul.
La Bruyère.

IT was well said of a certain German book that "es lässt sich nicht lesen" - it does not permit itself to be read. There are some secrets which do not permit themselves to be told. Men die nightly in their beds, wringing the hands of ghostly confessors, and looking them piteously in the eyes - die with despair of heart and convulsion of throat, on account of the hideousness of mysteries which will not suffer themselves to be revealed. Now and then, alas, the conscience of man takes up a burden so heavy in horror that it can be thrown down only into the grave. And thus the essence of all crime is undivulged.

Not long ago, about the closing in of an evening in autumn, I sat at the large bow-window of the D -Coffee-House in London. For some months I had been ill in health, but was now convalescent, and, with returning strength, found myself in one of those happy moods which are so precisely the converse of ennui: moods of the keenest appetency, when the film from the mental vision departs - the $\dot{a}_{\chi} \lambda \dot{v} s \hat{\eta} \pi \rho i \nu \dot{\epsilon} \pi \tilde{\eta} \epsilon \nu$ — and the intellect, electrified, surpasses as greatly its every-day condition, as does the vivid yet candid reason of Leibnitz the mad and flimsy rhetoric of Gorgias. Merely to breathe was enjoyment; and I derived
positive pleasure even from many of the legitimate sources of pain. I felt a calm but inquisitive interest in everything. With a cigar in my mouth and a newspaper in my lap, I had been amusing myself for the greater part of the afternoon, now in poring over advertisements, now in observing the promiscuous company in the room, and now in peering through the smoky panes into the street.

This latter is one of the principal thoroughfares of the city, and had been very much crowded during the whole day. But, as the darkness came on, the throng momently increased ; and, by the time the lamps were well lighted, two dense and continuous tides of population were rushing past the door. At this particular period of the evening I had never before been in a similar situation, and the tumultuous sea of human heads filled me, therefore, with a delicious novelty of emotion. I gave up, at length, all care of things within the hotel, and became absorbed in contemplation of the scene without.

At first my observations took an abstract and generalizing turn. I looked at the passengers in masses, and thought of them in their aggregate relations. Soon, however, I descended to details, and regarded with minute interest the innumerable varieties of figure, dress, air, gait, visage, and expression of countenance.

By far the greater number of those who went by had a satisfied business-like demeanor, and seemed to be thinking only of making their way through the press. Their brows were knit, and their eyes rolled quickly; when pushed against by fellow-wayfarers they evinced no symptom of impatience, but adjusted their clothes and hurried on. Others, still a numerous class, were
restless in their movements, had flushed faces, and talked and gesticulated to themselves, as if feeling in solitude on account of the very denseness of the company around. When impeded in their progress, these people suddenly ceased muttering, but redoubled their gesticulations, and awaited, with an absent and overdone smile upon the lips, the course of the persons impeding them. If jostled, they bowed profusely to the jostlers, and appeared overwhelmed with confusion. There was nothing very distinctive about these two large classes beyond what I have noted. Their habiliments belonged to that order which is pointedly termed the decent. They were undoubtedly noblemen, merchants, attorneys, tradesmen, stockjobbers - the Eupatrids and the common-places of society - men of leisure and men actively engaged in affairs of their own - conducting business upon their own responsibility. They did not greatly excite my attention.

The tribe of clerks was an obvious one; and here I discerned two remarkable divisions. There were the junior clerks of flash houses - young gentlemen with tight coats, bright boots, well-oiled hair, and supercilious lips. Setting aside a certain dapperness of carriage, which may be termed deskism for want of a better word, the manner of these persons seemed to me an exact fac-simile of what had been the perfection of bon ton about twelve or eighteen months before. They wore the cast-off graces of the gentry; and this, I believe, involves the best definition of the class.

The division of the upper clerks of stanch firms, or of the "steady old fellows," it was not possible to mistake. These were known by their coats and pantaloons of black or brown, made to sit comfortably, with
white cravats and waistcoats, broad solid-looking shoes, and thick hose or gaiters. They had all slightly bald heads, from which the right ears, long used to penholding, had an odd habit of standing off on end. I observed that they always removed or settled their hats with both hands, and wore watches, with short gold chains of a substantial and ancient pattern. Theirs was the affectation of respectability; if indeed there be an affectation so honorable.

There were many individuals of dashing appearance, whom I easily understood as belonging to the race of swell pick-pockets, with which all great cities are infested. I watched these gentry with much inquisitiveness, and found it difficult to imagine how they should ever be mistaken for gentlemen by gentlemen themselves. Their voluminousness of wristband, with an air of excessive frankness, should betray them at once.

The gamblers, of whom I descried not a few, were still more easily recognizable. They wore every variety of dress, from that of the desperate thimblerig bully, with velvet waistcoat, fancy neckerchief, gilt chains, and filagreed buttons, to that of the scrupulously inornate clergyman than which nothing could be less liable to suspicion. Still all were distinguished by a certain sodden swarthiness of complexion, a filmy dimness of eye, and pallor and compression of lip. There were two other traits, moreover, by which I could always detect them: a guarded lowness of tone in conversation, and a more than ordinary extension of the thumb in a direction at right angles with the fingers. Very often, in company with these sharpers, I observed an order of men somewhat different in habits, but still birds of a kindred

[^0]feather. They may be defined as the gentlemen who live by their wits. They seem to prey upon the public in two battalions - that of the dandies and that of the military men. Of the first grade the leading features are long locks and smiles; of the second frogged coats and frowns.

Descending in the scale of what is termed gentility, I found darker and deeper themes for speculation. I saw Jew pedlers, with hawk eyes flashing from countenances whose every other feature wore only an expression of abject humility; sturdy professional street beggars scowling upon mendicants of a better stamp, whom despair alone had driven forth into the night for charity ; feeble and ghastly invalids, upon whom death had placed a sure hand, and who sidled and tottered through the mob, looking every one beseechingly in the face, as if in search of some chance consolation, some lost hope ; modest young girls returning from long and late labor to a cheerless home, and shrinking more tearfully than indignantly from the glances of ruffians, whose direct contact, even, could not be avoided; women of the town of all kinds and of all ages - the unequivocal beauty in the prime of her womanhood, putting one in mind of the statue in Lucian, with the surface of Parian marble, and the interior filled with filth - the loathsome and utterly lost leper in rags - the wrinkled, bejewelled and paint-begrimed beldame, making a last effort at youth - the mere child of immature form, yet, from long association, an adept in the dreadful coquetries of her trade, and burning with a rabid ambition to be ranked the equal of her elders in vice; drunkards innumerable and indescribable - some in shreds and patches, reeling, inarticulate, with bruised visage and lack-lustre
eyes - some in whole although filthy garments, with a slightly unsteady swagger, thick sensual lips, and hearty-looking rubicund faces - others clothed in materials which had once been good, and which even now were scrupulously well brushed - men who walked with a more than naturally firm and springy step, but whose countenances were fearfully pale, whose eyes hideously wild and red, and who clutched with quivering fingers, as they strode through the crowd, at every object which came within their reach; besides these, pie-men, porters, coal-heavers, sweeps; organ-grinders, monkey-exhibiters and ballad-mongers, those who vended with those who sang ; ragged artisans and exhausted laborers of every description, and all full of a noisy and inordinate vivacity which jarred discordantly upon the ear, and gave an aching sensation to the eye.

As the night deepened, so deepened to me the interest of the scene; for not only did the general character of the crowd materially alter, (its gentler features retiring in the gradual withdrawal of the more orderly portion of the people, and its harsher ones coming out into bolder relief, as the late hour brought forth every species of infamy from its den) but the rays of the gas-lamps, feeble at first in their struggle with the dying day, had now at length gained ascendency, and threw over everything a fitful and garish lustre. All was dark yet splendid - as that ebony to which has been likened the style of Tertullian.

The wild effects of the light enchained me to an examination of individual faces; and although the rapidity with which the world of light flitted before the window prevented me from casting more than a glance upon each visage, still it seemed that, in my then
peculiar mental state, I could frequently read, even in that brief interval of a glance, the history of long years.

With my brow to the glass, I was thus occupied in scrutinizing the mob, when suddenly there came into view a countenance, (that of a decrepit old man, some sixty-five or seventy years of age) - a countenance which at once arrested and absorbed my whole attention, on account of the absolute idiosyncrasy of its expression. Anything even remotely resembling that expression I had never seen before. I well remember that my first thought, upon beholding it, was that Retzch, had he viewed it, would have greatly preferred it to his own pictural incarnations of the fiend. As I endeavored, during the brief minute of my original survey, to form some analysis of the meaning conveyed, there arose confusedly and paradoxically within my mind the ideas of vast mental power, of caution, of penuriousness, of avarice, of coolness, of malice, of bloodthirstiness, of triumph, of merriment, of excessive terror, of intense - of supreme despair. I felt singularly aroused, startled, fascinated. "How wild a history," I said to myself, " is written within that bosom!" Then came a craving desire to keep the man in view - to know more of him. Hurriedly putting on an overcoat, and seizing my hat and cane, I made my way into the street, and pushed through the crowd in the direction which I had seen him take; for he had already disappeared. With some little difficulty I at length came within sight of him, approached, and followed him closely, yet cautiously, so as not to attract his attention.

I had now a good opportunity of examining his person. He was short in stature, very thin, and
apparently very feeble. His clothes, generally, were filthy and ragged; but as he came, now and then, within the strong glare of a lamp, I perceived that his linen, although dirty, was of beautiful texture; and my vision deceived me, or, through a rent in a closelybuttoned and evidently second-handed roquelaire which enveloped him, I caught a glimpse both of a diamond and of a dagger. These observations heightened my curiosity, and I resolved to follow the stranger whithersoever he should go.

It was now fully nightfall, and a thick humid fog hung over the city, soon ending in a settled and heavy rain. This change of weather had an odd effect upon the crowd, the whole of which was at once put into new commotion, and overshadowed by a world of umbrellas. The waver, the jostle, and the hum increased in a tenfold degree. For my own part I did not much regard the rain - the lurking of an old fever in my system rendering the moisture somewhat too dangerously pleasant. Tying a handkerchief about my mouth, I kept on. For half an hour the old man held his way with difficulty along the great thoroughfare; and I here walked close at his elbow through fear of losing sight of him. Never once turning his head to look back, he did not observe me. By-andby he passed into a cross street, which, although densely filled with people, was not quite so much thronged as the main one he had quitted. Here a change in his demeanor became evident. He walked more slowly and with less object than before - more hesitatingly. He crossed and re-crossed the way repeatedly without apparent aim; and the press was still so thick, that, at every such movement, I was obliged to follow him closely. The street was a nar-
row and long one, and his course lay within it for nearly an hour, during which the passengers had gradually diminished to about that number which is ordinarily seen at noon in Broadway near the park so vast a difference is there between a London populace and that of the most frequented American city. A second turn brought us into a square, brilliantly lighted, and overflowing with life. The old manner of the stranger reappeared. His chin fell upon his breast, while his eyes rolled wildly from under his knit brows, in every direction. upon those who hemmed him in. He urged his way steadily and perseveringly. I was surprised, however, to find, upon his having made the circuit of the square, that he turned and retraced his steps. Still more was I astonished to see him repeat the same walk several times - once nearly detecting me as he came round with a sudden movement.

In this exercise he spent another hour, at the end of which we met with far less interruption from passengers than at first. The rain fell fast; the air grew cool; and the people were retiring to their homes. With a gesture of impatience, the wanderer passed into a by-street comparatively deserted. Down this, some quarter of a mile long, he rushed with an activity I could not have dreamed of seeing in one so aged, and which put me to much trouble in pursuit. A few minutes brought us to a large and busy bazaar, with the localities of which the stranger appeared well acquainted, and where his original demeanor again became apparent, as he forced his way to and fro, without aim, among the host of buyers and sellers.

During the hour and a half, or thereabouts, which we passed in this place, it required much caution on


THE MAN OF THE CROWD
my part to keep him within reach without attracting his observation. Luckily I wore a pair of caoutchouc overshoes, and could move about in perfect silence. At no moment did he see that I watched him. He entered shop after shop, priced nothing, spoke no word, and looked at all objects with a wild and vacant stare. I was now utterly amazed at his behavior, and firmly resolved that we should not part until I had satisfied myself in some measure respecting him.

A loud-toned clock struck eleven, and the company were fast deserting the bazaar. A shop-keeper, in putting up a shutter, jostled the old man, and at the instant I saw a strong shudder come over his frame. He hurried into the street, looked anxiously around him for an instant, and then ran with incredible swiftness through many crooked and peopleless lanes, until we emerged once more upon the great thoroughfare whence we had started - the street of the DHotel. It no longer wore, however, the same aspect. It was still brilliant with gas; but the rain fell fiercely, and there were few persons to be seen. The stranger grew pale. He walked moodily some paces up the once populous avenue, then, with a heavy sigh, turned in the direction of the river, and, plunging through a great variety of devious ways, came out, at length, in view of one of the principal theatres. It was about being closed, and the audience were thronging from the doors. I saw the old man gasp as if for breath while he threw himself amid the crowd; but I thought that the intense agony of his countenance had, in some measure, abated. His head again fell upon his breast; he appeared as I had seen him at first. I observed that he now took the course in which had gone the greater number of the audience - but, upon the whole,

I was at a loss to comprehend the waywardness of his actions.

As he proceeded, the company grew more scattered, and his old uneasiness and vacillation were resumed. For some time he followed closely a party of some ten or twelve roisterers; but from this number one by one dropped off, until three only remained together, in a narrow and gloomy lane little frequented. The stranger paused, and, for a moment, seemed lost in thought; then, with every mark of agitation, pursued rapidly a route which brought us to the verge of the city, amid regions very different from those we had hitherto traversed. It was the most noisome quarter of London, where everything wore the worst impress of the most deplorable poverty, and of the most desperate crime. By the dim light of an accidental lamp, tall, antique, worm-eaten, wooden tenements were seen tottering to their fall, in directions so many and capricious that scarce the semblance of a passage was discernible between them. The paving-stones lay at random, displaced from their beds by the ranklygrowing grass. Horrible filth festered in the dammedup gutters. The whole atmosphere teemed with desolation. Yet, as we proceeded, the sounds of human life revived by sure degrees, and at length large bands of the most abandoned of a London populace were seen reeling to and fro. The spirits of the old man again flickered up, as a lamp which is near its death-hour. Once more he strode onward with elastic tread. Suddenly a corner was turned, a blaze of light burst upon our sight, and we stood before one of the huge suburban temples of Intemperance - one of the palaces of the fiend, Gin.

It was now nearly daybreak; but a number of
wretched inebriates still pressed in and out of the flaunting entrance. With a half-shriek of joy the old man forced a passage within, resumed at once his original bearing, and stalked backward and forward, without apparent object, among the throng. He had not been thus long occupied, however, before a rush to the doors gave token that the host was closing them for the night. It was something even more intense than despair that I then observed upon the countenance of the singular being whom I had watched so pertinaciously. Yet he did not hesitate in his career, but, with a mad energy, retraced his steps at once, to the heart of the mighty London. Long and swiftly he fled, while I followed him in the wildest amazement, resoiute not to abandon a scrutiny in which I now felt an interest all-absorbing. The sun arose while we proceeded, and, when we had once again reached that most thronged mart of the populous town, the street of the D- Hotel, it presented an appearance of human bustle and activity scarcely inferior to what I had seen on the evening before. And here, long, amid the momently increasing confusion, did I persist in my pursuit of the stranger. But, as usual, he walked to and fro, and during the day did not pass from out the turmoil of that street. And, as the shades of the second evening came on, I grew wearied unto death, and, stopping fully in front of the wanderer, gazed at him steadfastly in the face. He noticed me not, but resumed his solemn walk, while I, ceasing to follow, remained absorbed in contemplation. "This old man," I said at length, "is the type and the genius of deep crime. He refuses to be alone. He is the man of the crowd. It will be in vain to follow; for I shall learn no more of him, nor

## TALES OF CONSCIENCE

of his deeds. The worst heart of the world is a grosser book than the Ortulus Anima, ${ }^{1}$ and perhaps it is but one of the great mercies of God that 'er lässt sich nicht lesen.'"
${ }_{1}$ The Ortulus Anima cum Orationibus Aliquibus Superadditis of Gruininger.

## II

## TALES OF NATURAL BEAUTY

## TALES OF NATURAL BEAUTY

## THE ELK

THE natural scenery of America has often been contrasted in its general features, as well as in detail, with the landscape of the Old World - more especially of Europe - and not deeper has been the enthusiasm, than wide the dissension, of the supporters of each region. The discussion is one not likely to be soon closed, for although much has been said on both sides, a world more yet remains to be said.

The most conspicuous of the British tourists who have attempted a comparison seem to regard our northern and eastern seaboard, comparatively speaking, as all of America, at least as all of the United States, worthy of consideration. They say little, because they have seen less, of the gorgeous interior scenery of some of our western and southern districts, - of the vast valley of Louisiana, for example, - a realization of the wildest dreams of paradise. For the most part, these travellers content themselves with a hasty inspection of the natural "lions" of the land, the Hudson, Niagara, the Catskills, Harper's Ferry, the lakes of New York, the Ohio, the prairies, and the Mississippi. These, indeed, are objects well worthy
the contemplation even of him who has just clambered by the castellated Rhine, or roamed
"By the blue rushing of the arrowy Rhone;"
but these are not all of which we can boast; and, indeed, I will be so hardy as to assert that there are innumerable quiet, obscure, and scarcely explored nooks, within the limits of the United States, that, by the true artist, or cultivated lover of the grand and beautiful amid the works of God, will be preferred to each and to all of the chronicled and better accredited scenes to which I have referred.

In fact, the real Edens of the land lie far away from the track of our most deliberate tourists, - how very far, then, beyond the reach of the foreigner, who, having made with his publisher at home arrangements for a certain amount of comment upon America, to be furnished in a stipulated period, can hope to fulfil his agreement in no other manner than by steaming it, memorandum-book in hand, through only the most beaten thoroughfares of the country!

I mentioned, just above, the valley of Louisiana. Of all extensive areas of natural loveliness, this is, perhaps, the most lovely. No fiction has approached it. The most gorgeous imagination might derive suggestions from its exuberant beauty. And beauty is, indeed, its sole character. It has little, or rather nothing, of the sublime. Gentle undulations of soil, interwreathed with fantastic crystallic streams, banked by flowery slopes, and backed by a forest vegetation, gigantic, glossy, multi-colored, sparkling with gay birds, and burdened with perfume, - these features make up, in the vale of Louisiana, the most voluptuous natural scenery upon earth.

But, even of this delicious region, the sweeter portions are reached only by by-paths. Indeed, in America generally, the traveller who would behold the finest landscapes, must seek them, not by the railroad, nor by the steamboat, nor by the stage-coach, nor in his private carriage, nor yet even on horseback, - but on foot. He must walk, he must leap ravines, he must risk his neck among precipices, or he must leave unseen the truest, the richest, and most unspeakable glories of the land.

Now, in the greater portion of Europe no such necessity exists. In England it exists not at all. The merest dandy of a tourist may there visit every nook worth visiting, without detriment to his silk stockings, so thoroughly known are all points of interest, and so well arranged are the means of attaining them. This consideration has never been allowed its due weight, in comparisons of the natural scenery of the Old and New Worlds. The entire loveliness of the former is collated with only the most noted, and with by no means the most eminent, items in the general loveliness of the latter.

River scenery has, unquestionably, within itself, all the main elements of beauty, and, time out of mind, has been the favorite theme of the poet. But much of this fame is attributable to the predominance of travel in fluvial over that in mountainous districts. In the same way large rivers, because usually highways, have, in all countries, absorbed an undue share of admiration. They are more observed, and, consequently, made more the subject of discourse, than less important, but often more interesting streams.

A singular exemplification of my remarks upon this head may be found in the Wissahiccon, a brook (for
more it can scarcely be called) which empties itself into the Schuylkill, about six miles westward of Philadelphia. Now, the Wissahiccon is of so remarkable a loveliness, that, were it flowing in England, it would be the theme of every bard, and the common topic of every tongue, if, indeed, its banks were not parcelled off in lots, at an exorbitant price, as building-sites for the villas of the opulent. Yet it is only within a very few years that any one has more than heard of the Wissahiccon, while the broader and more navigable water into which it flows has been long celebrated as one of the finest specimens of American river-scenery. The Schuylkill, whose beauties have been much exaggerated, and whose banks, at least in the neighborhood of Philadelphia, are marshy, like those of the Delaware, is not at all comparable, as an object of picturesque interest, with the more humble and less notorious rivulet of which we speak.

It was not until Fanny Kemble, in her droll book about the United States, pointed out to the Philadelphians the rare loveliness of a stream which lay at their own doors, that this loveliness was more than suspected by a few adventurous pedestrians of the vicinity. But the "Journal" having opened all eyes, the Wissahiccon, to a certain extent, rolled at once into notoriety. I say "to a certain extent," for, in fact, the true beauty of the stream lies far above the route of the Philadelphian picturesque-hunters, who rarely proceed farther than a mile or two above the mouth of the rivulet - for the very excellent reason that here the carriage-road stops. I would advise the adventurer who would behold its finest points to take the Ridge Road, running westwardly from the city, and, having reached the second lane beyond the sixth
milestone, to follow this lane to its termination. He will thus strike the Wissahiccon at one of its best reaches, and, in a skiff, or by clambering along its banks, he can up or down the stream, as best suits his fancy, and in either direction will meet his reward.

I have already said, or should have said, that the brook is narrow. Its banks are generally, indeed almost universally, precipitous, and consist of high hills, clothed with noble shrubbery near the water, and crowned, at a greater elevation, with some of the most magnificent forest-trees of America, among which stands conspicuous the Liriodendron Tulipifera. The immediate shores, however, are of granite, sharply defined or moss-covered, against which the pellucid water lolls in its gentle flow, as the blue waves of the Mediterranean upon the steps of her palaces of marble. Occasionally, in front of the cliffs, extends a small, definite plateau of richly-herbaged land, affording the most picturesque position for a cottage and garden which the richest imagination could conceive. The windings of the stream are many and abrupt, as is usually the case where banks are precipitous, and thus the impression conveyed to the voyager's eye, as he proceeds, is that of an endless succession of infinitely varied small lakes, or, more properly speaking, tarns. The Wissahiccon, however, should be visited, not like "fair Melrose," by moonlight, or even in cloudy weather, but amid the brightest glare of a noonday sun; for the narrowness of the gorge through which it flows, the height of the hills on either hand, and the density of the foliage, conspire to produce a gloominess, if not an absolute dreariness, of effect, which, unless relieved by a bright, general light, detracts from the mere beauty of the scene.

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Not long ago, I visited the stream by the route described, and spent the better part of a sultry day in floating in a skiff upon its bosom. The heat gradually overcame me; and, resigning myself to the influence of the scenes and of the weather, and of the gentlymoving current, I sank into a half-slumber, during which my imagination revelled in visions of the Wissahiccon of ancient days - of the "good old days" when the Demon of the Engine was not, when picnics were undreamed of, when "water privileges" were neither bought nor sold, and when the red man trod alone, with the elk, upon the ridges that now towered above. And, while gradually these conceits took possession of my mind, the lazy brook had borne me, inch by inch, around one promontory, and within full view of another that bounded the prospect at the distance of forty or fifty yards. It was a steep, rocky cliff, abutting far into the stream, and presenting much more of the Salvator character than any portion of the shore hitherto passed. What I saw upon this cliff, although surely an object of very extraordinary nature, the place and season considered, at first neither startled nor amazed me - so thoroughly and appropriately did it chime in with the half-slumberous fancies that enwrapped me. I saw, or dreamed that I saw, standing upon the extreme verge of the precipice, with neck outstretched, with ears erect, and the whole atlitude indicative of profound and melancholy inquisitiveness, one of the oldest and boldest of those identical elks which had been coupled with the red men of my vision.

I say that, for a few minutes, this apparition neither startled nor amazed me. During this interval my whole soul was bound up in intense sympathy alone.

I fancied the elk repining, not less than wondering, at the manifest alterations for the worse, wrought upon the brook and its vicinage, even within the last few years, by the stern hand of the utilitarian. But a slight movement of the animal's head at once dispelled the dreaminess that invested me, and aroused me to a full sense of the novelty of the adventure. I arose upon one knee within the skiff, and, while I hesitated whether to stop my career, or let myself float nearer to the object of my wonder, I heard the words "Hist! hist!" ejaculated quickly, but cautiously, from the shrubbery overhead. In an instant afterwards, a negro emerged from the thicket, putting aside the bushes with care, and treading stealthily. He bore in one hand a quantity of salt, and, holding it out towards the elk, gently but steadily approached. The noble animal, although a little fluttered, made no attempt at escape. The negro advanced, offered the salt, and spoke a few words of encouragement or conciliation. Presently the elk bowed and stamped, and then lay quietly down, and was secured with a halter.

Thus ended my romance of the elk. It was a pet of great age, and very domestic habits, and belonged to an English family occupying a villa in the vicinity.

## THE ISLAND OF THE FAY

> Nullus enim locus sine genio est.
> SERviUS.

" $L$A musique," says Marmontel, in those Contes Moraux ${ }^{1}$ which, in all our translations, we have insisted upon calling "Moral Tales," as if in mockery of their spirit, -" la musique est le seul des talents qui jouit de lui-même; tous les autres veulent des témoins." He here confounds the pleasure derivable from sweet sounds with the capacity for creating them. No more than any other talent is that for music susceptible of complete enjoyment, where there is no second party to appreciate its exercise. And it is only in common with other talents that it produces effects which may be fully enjoyed in solitude. The idea which the raconteur has either failed to entertain clearly, or has sacrificed in its expression to his national love of point, is, doubtless, the very tenable one that the higher order of music is the most thoroughly estimated when we are exclusively alone. The proposition, in this form, will be admitted at once by those who love the lyre for its own sake, and for its spiritual uses. But there is one pleasure still within the reach of fallen mortality - and, perhaps, only one

[^1]- which owes even more than does music to the accessory sentiment of seclusion. I mean the happiness experienced in the contemplation of natural scenery. In truth, the man who would behold aright the glory of God upon earth must in solitude behold that glory. To me, at least, the presence - not of human life only, but of life in any other form than that of the green things which grow upon the soil, and are voiceless - is a stain upon the landscape, is at war with the genius of the scene. I love indeed to regard the dark valleys, and the gray rocks, and the waters that silently smile, and the forests that sigh in uneasy slumbers, and the proud watchful mountains that look down upon all - I love to regard these as themselves but the colossal members of one vast animate and sentient whole: a whole whose form (that of the sphere) is the most perfect and most inclusive of all; whose path is among associate planets; whose meek handmaiden is the moon; whose mediate sovereign is the sun; whose life is eternity; whose thought is that of a God; whose enjoyment is knowledge; whose destinies are lost in immensity; whose cognizance of ourselves is akin with our own cognizance of the animalculce which infest the brain - a being which we, in consequence, regard as purely inanimate and material, much in the same manner as these animalculce must thus regard us.

Our telescopes and our mathematical investigations assure us on every hand, notwithstanding the cant of the more ignorant of the priesthood, that space, and therefore that bulk, is an important consideration in the eyes of the Almighty. The cycles in which the stars move are those best adapted for the evolution, without collision, of the greatest possible number of
bodies. The forms of those bodies are accurately such as, within a given surface, include the greatest possible amount of matter; while the surfaces themselves are so disposed as to accommodate a denser population than could be accommodated on the same surfaces otherwise arranged. Nor is it any argument against bulk being an object with God, that space itself is infinite; for there may be an infinity of matter to fill it. And since we see clearly that the endowment of matter with vitality is a principle - indeed, as far as our judgments extend, the leading principle in the operations of Deity - it is scarcely logical to imagine it confined to the regions of the minute, where we daily trace it, and not extending to those of the august. As we find cycle within cycle without end, yet all revolving around one far-distant centre which is the Godhead, may we not analogically suppose, in the same manner, life within life, the less within the greater, and all within the Spirit Divine? In short, we are madly erring, through self-esteem, in believing man, in either his temporal or future destinies, to be of more moment in the universe than that vast "clod of the valley" which he tills and contemns, and to which he denies a soul, for no more profound reason than that he does not behold it in operation. ${ }^{1}$

These fancies, and such as these, have always given to my meditations among the mountains, and the forests, by the rivers and the ocean, a tinge of what the every-day world would not fail to term the fantastic. My wanderings amid such scenes have been many,

[^2]and far-searching, and often solitary; and the interest with which I have strayed through many a dim, deep valley, or gazed into the reflected heaven of many a bright lake, has been an interest greatly deepened by the thought that I have strayed and gazed alone. What flippant Frenchman ${ }^{1}$ was it who said, in allusion to the well-known work of Zimmerman, that "la solitude est une belle chose; mais il faut quelqu'un pour wous dire que la solitude est une belle chose." The epigram cannot be gainsaid; but the necessity is a thing that does not exist.

It was during one of my lonely journeyings, amid a far-distant region of mountain locked within mountain, and sad rivers and melancholy tarns writhing or sleeping within all, that I chanced upon a certain rivulet and island. I came upon them suddenly in the leafy June, and threw myself upon the turf, beneath the branches of an unknown odorous shrub, that I might doze as I contemplated the scene. I felt that thus only should I look upon it - such was the character of phantasm which it wore.

On all sides, save to the west, where the sun was about sinking, arose the verdant walls of the forest. The little river, which turned sharply in its course, and was thus immediately lost to sight, seemed to have no exit from its prison, but to be absorbed by the deep green foliage of the trees to the east; while in the opposite quarter (so it appeared to me as I lay at length and glanced upward) there poured down noiselessly and continuously into the valley a rich golden and crimson waterfall from the sunset fountains of the sky.

[^3]About midway in the short vista which my dreamy vision took in, one small circular island, profusely verdured, reposed upon the bosom of the stream.

> "So blended bank and shadow there
> That each seemed pendulous in air:"
so mirror-like was the glassy water, that it was scarcely possible to say at what point upon the slope of the emerald turf its crystal dominion began.

My position enabled me to include in a single view both the eastern and western extremities of the islet; and I observed a singularly marked difference in their aspects. The latter was all one radiant harem of garden beauties. It glowed and blushed beneath the eye of the slant sunlight, and fairly laughed with flowers. The grass was short, springy, sweet-scented, and asphodel-interspersed. The trees were lithe, mirthful, erect - bright, slender, and graceful - of eastern figure and foliage, with bark smooth, glossy, and party-colored. There seemed a deep sense of life and joy about all; and although no airs blew from out the heavens, yet everything had motion through the gentle sweepings to and fro of innumerable butterfies, that might have been mistaken for tulips with wings. ${ }^{1}$

The other or eastern end of the isle was whelmed in the blackest shade. A sombre, yet beautiful and peaceful gloom here pervaded all things. The trees were dark in color and mournful in form and attitude: wreathing themselves into sad, solemn, and spectral shapes, that conveyed ideas of mortal sorrow and untimely death. The grass wore the deep tint of

[^4]the cypress, and the heads of its blades hung droopingly, and, hither and thither among it, were many small unsightly hillocks, low and narrow, and not very long, that had the aspect of graves, but were not; although over and all about them the rue and the rosemary clambered. The shade of the trees fell heavily upon the water, and seemed to bury itself therein, impregnating the depths of the element with darkness. I fancied that each shadow, as the sun descended lower and lower, separated itself sullenly from the trunk that gave it birth, and thus became absorbed by the stream; while other shadows issued momently from the trees, taking the place of their predecessors thus entombed.

This idea, having once seized upon my fancy, greatly excited it, and I lost myself forthwith in revery. "If ever island were enchanted," said I to myself, " this is it. This is the haunt of the few gentle Fays who remain from the wreck of the race. Are these green tombs theirs? - or do they yield up their sweet lives as mankind yield up their own ? In dying, do they not rather waste away mournfully; rendering unto God little by little their existence, as these trees render up shadow after shadow, exhausting their substance unto dissolution? What the wasting tree is to the water that imbibes its shade, growing thus blacker by what it preys upon, may not the life of the Fay be to the death which engulfs it?"

As I thus mused, with half-shut eyes, while the sun sank rapidly to rest, and eddying currents careered round and round the island, bearing upon their bosom large, dazzling, white flakes of the bark of the sycamore, - flakes which, in their multiform positions upon the water, a quick imagination might have con-
verted into anything it pleased, - while I thus mused, it appeared to me that the form of one of those very Fays about whom I had been pondering, made its way slowly into the darkness from out the light at the western end of the island. She stood erect in a singularly fragile canoe, and urged it with the mere phantom of an oar. While within the influence of the lingering sunbeams, her attitude seemed indicative of joy, but sorrow deformed it as she passed within the shade. Slowly she glided along, and at length rounded the islet and re-entered the region of light. "The revolution which has just been made by the Fay," continued I, musingly, "is the cycle of the brief year of her life. She has floated through her winter and through her summer. She is a year nearer unto Death: for I did not fail to see that as she came into the shade, her shadow fell from her, and was swallowed up in the dark water, making its blackness more black."

And again the boat appeared, and the Fay; but about the attitude of the latter there was more of care and uncertainty, and less of elastic joy. She floated again from out the light, and into the gloom (which deepened momently), and again her shadow fell from her into the ebony water, and became absorbed into its blackness. And again and again she made the circuit of the island (while the sun rushed down to his slumbers), and at each issuing into the light, there was more sorrow about her person, while it grew feebler, and far fainter, and more indistinct; and at each passage into the gloom, there fell from her a darker shade, which became whelmed in a shadow more black. But at length, when the sun had utterly
departed, the Fay, now the mere ghost of her former self, went disconsolately with her boat into the region of the ebony flood: and that she issued thence at all I cannot say, - for darkness fell over all things, and I beheld her magical figure no more.

## THE DOMAIN OF ARNHEIM

> The garden like a ladie faire was cut, That lay as if shee slumber'd in delight, And to the open skies her eyes did shut; The azure fields of heau'n wear 'sembled right In a large round set with the flow'rs of light: The flow'rs-de-luce, and the round sparks of deaw, That hung vpon their azure leauves, did shew Like twinkling starrs, that sparkle in th' eav'ning blew. Giles Fletcher: Christ's Victory on Earth.

From his cradle to his grave a gale of prosperity bore my friend Ellison along. Nor do I use the word prosperity in its mere worldly sense. I mean it as synonymous with happiness. The person of whom I speak seemed born for the purpose of foreshadowing the doctrines of Turgot, Price, Priestley, and Condorcet - of exemplifying by individual instance what has been deemed the chimera of the perfectionists. In the brief existence of Ellison I fancy that I have seen refuted the dogma, that in man's very nature lies some hidden principle, the antagonist of bliss. An anxious examination of his career has given me to understand that, in general, from the violation of a few simple laws of humanity arises the wretchedness of mankind; that as a species we have in our possession the as yet unwrought elements of content; and that, even now, in the present darkness and madness of all thought on the great question of the social
condition, it is not impossible that man, the individual, under certain unusual and highly fortuitous conditions, may be happy.

With opinions such as these my young friend, too, was fully imbued; and thus it is worthy of observation that the uninterrupted enjoyment which distinguished his life was, in great measure, the result of preconcert. It is, indeed, evident that with less of the instinctive philosophy which, now and then, stands so well in the stead of experience, Mr. Ellison would have found himself precipitated, by the very extraordinary successes of his life, into the common vortex of unhappiness which yawns for those of pre-eminent endowments. But it is by no means my object to pen an essay on happiness. The ideas of my friend may be summed up in a few words. He admitted but four elementary principles, or, more strictly, conditions, of bliss. That which he considered chief was (strange to say!) the simple and purely physical one of free exercise in the open air. "The health," he said, "attainable by other means, is scarcely worth the name." He instanced the ecstasies of the fox-hunter, and pointed to the tillers of the earth, the only people who, as a class, can be fairly considered happier than others. His second condition was the love of woman. His third, and most difficult of realization, was the contempt of ambition. His fourth was an object of unceasing pursuit; and he held that, other things being equal, the extent of attainable happiness was in proportion to the spirituality of this object.

Ellison was remarkable in the continuous profusion of good gifts lavished upon him by fortune. In personal grace and beauty he exceeded all men. His intellect was of that order to which the acquisition of
knowledge is less a labor than an intuition and a necessity. His family was one of the most illustrious of the empire. His bride was the loveliest and most devoted of women. His possessions had been always ample; but, on the attainment of his majority, it was discovered that one of those extraordinary freaks of fate had been played in his behalf, which startle the whole social world amid which they occur, and seldom fail radically to alter the moral constitution of those who are their objects.

It appears that about a hundred years before Mr . Ellison's coming of age, there had died, in a remote province, one Mr. Seabright Ellison. This gentleman had amassed a princely fortune, and, having no immediate connections, conceived the whim of suffering his wealth to accumulate for a century after his decease. Minutely and sagaciously directing the various modes of investment, he bequeathed the aggregate amount to the nearest of blood bearing the name Ellison, who should be alive at the end of the hundred years. Many attempts had been made to set aside this singular bequest; their ex post facto character rendered them abortive; but the attention of a jealous government was aroused, and a legislative act finally obtained, forbidding all similar accumulations. This act, however, did not prevent young Ellison from entering into possession, on his twentyfirst birthday, as the heir of his ancestor Seabright, of a fortune of four hundred and fifty millions of dollars. ${ }^{1}$
${ }^{1}$ An incident, similar in outline to the one here imagined, occurred not very long ago in England. The name of the fortunate heir was Thellusson. I first saw an account of this matter in the "Tour" of Prince Puickler-Muskau, who makes the sum

When it had become known that such was the enormous wealth inherited, there were, of course, many speculations as to the mode of its disposal. The magnitude and the immediate availability of the sum bewildered all who thought on the topic. The possessor of any appreciable amount of money might have been imagined to perform any one of a thousand things. With riches merely surpassing those of any citizen, it would have been easy to suppose him engaging to supreme excess in the fashionable extravagances of his time - or busying himself with political intrigue - or aiming at ministerial power - or purchasing increase of nobility - or collecting large museums of virtì - or playing the munificent patron of letters, of science, of art - or endowing, and bestowing his name upon, extensive institutions of charity. But for the inconceivable wealth in the actual possession of the heir, these objects, and all ordinary objects, were felt to afford too limited a field. Recourse was had to figures, and these but sufficed to confound. It was seen that, even at three per cent., the annual income of the inheritance amounted to no less than thirteen millions and five hundred thousand dollars; which was one million and one hundred and twenty-five thousand per month; or thirty-six thousand
inherited ninety millions of pounds, and justly observes that "in the contemplation of so vast a sum, and of the services to which it might be applied, there is something even of the sublime." To suit the views of this article I have followed the Prince's statement, although a grossly exaggerated one. The germ and, in fact, the commencement of the present paper was published many years ago - previous to the issue of the first number of Sue's admirable Fuif Errant, which may possibly have been suggested to him by Muskau's account.
nine hundred and eighty-six per day; or one thousand five hundred and forty-one per hour; or six and twenty dollars for every minute that flew. Thus the usual track of supposition was thoroughly broken up. Men knew not what to imagine. There were some who even conceived that Mr. Ellison would divest himself of at least one-half of his fortune, as of utterly superfluous opulence - enriching whole troops of his relatives by division of his superabundance. To the nearest of these he did, in fact, abandon the very unusual wealth which was his own before the inheritance.

I was not surprised, however, to perceive that he had long made up his mind on a point which had occasioned so much discussion to his friends. Nor was I greatly astonished at the nature of his decision. In regard to individual charities he had satisfied his conscience. In the possibility of any improvement, properly so called, being effected by man himself in the general condition of man, he had (I am sorry to confess it) little faith. Upon the whole, whether happily or unhappily, he was thrown back, in very great measure, upon self.

In the widest and noblest sense he was a poet. He comprehended, moreover, the true character, the august aims, the supreme majesty and dignity of the poetic sentiment. The fullest, if not the sole proper satisfaction of this sentiment he instinctively felt to lie in the creation of novel forms of beauty. Some peculiarities, either in his early education or in the nature of his intellect, had tinged with what is termed materialism all his ethical speculations; and it was this bias, perhaps, which led him to believe that the most advantageous at least, if not the sole legitimate, field for the poetic exercise lies in the creation of novel
modes of purely physical loveliness. Thus it happened he became neither musician nor poet, if we use this latter term in its every-day acceptation. Or it might have been that he neglected to become either, merely in pursuance of his idea that in contempt of ambition is to be found one of the essential principles of happiness on earth. Is it not, indeed, possible that, while a high order of genius is necessarily ambitious, the highest is above that which is termed ambition? And may it not thus happen that many far greater than Milton have contentedly remained "mute and inglorious"? I believe that the world has never seen - and that, unless through some series of accidents goading the noblest order of mind into distasteful exertion, the world will never see - that full extent of triumphant execution, in the richer domains of art, of which the human nature is absolutely capable.
Ellison became neither musician nor poet ; although no man lived more profoundly enamoured of music and poetry. Under other circumstances than those which invested him, it is not impossible that he would have become a painter. Sculpture, although in its nature rigorously poetical, was too limited in its extent and consequences to have occupied, at any time, much of his attention. And I have now mentioned all the provinces in which the common understanding of the poetic sentiment has declared it capable of expatiating. But Ellison maintained that the richest, the truest, and most natural, if not altogether the most extensive province, had been unaccountably neglected. No definition had spoken of the landscape-gardener as of the poet ; yet it seemed to my friend that the creation of the landscapegarden offered to the proper Muse the most magnificent of opportunities. Here, indeed, was the fairest field for
the display of imagination in the endless combining of forms of novel beauty; the elements to enter into combination being, by a vast superiority, the most glorious which the earth could afford. In the multiform and multicolor of the flowers and the trees, he recognized the most direct and energetic efforts of Nature at physical loveliness. And in the direction or concentration of this effort, or, more properly, in its adaptation to the eyes which were to behold it on earth, he perceived that he should be employing the best means - laboring to the greatest advantage - in the fulfilment, not only of his own destiny as poet, but of the august purposes for which the Deity had implanted the poetic sentiment in man.
"Its adaptation to the eyes which were to behold it on earth." In his explanation of this phraseology, Mr. Ellison did much toward solving what has always seemed to me an enigma:-I mean the fact (which none but the ignorant dispute) that no such combination of scenery exists in nature as the painter of genius may produce. No such paradises are to be found in reality as have glowed on the canvas of Claude. In the most enchanting of natural landscapes there will always be found a defect or an excess - many excesses and defects. While the component parts may defy, individually, the highest skill of the artist, the arrangement of these parts will always be susceptible of improvement. In short, no position can be attained on the wide surface of the natural earth, from which an artistical eye, looking steadily, will not find matter of offence in what is termed the "composition " of the landscape. And yet how unintelligible is this! In all other matters we are justly instructed to regard nature as supreme. With her details we shrink from
competition. Who shall presume to imitate the colors of the tulip, or to improve the proportions of the lily of the valley? The criticism which says, of sculpture or portraiture, that here nature is to be exalted or idealized rather than imitated, is in error. No pictorial or sculptural combinations of points of human loveliness do more than approach the living and breathing beauty. In landscape alone is the principle of the critic true ; and, having felt its truth here, it is but the headlong spirit of generalization which has led him to pronounce it true throughout all the domains of art. Having, I say, felt its truth here; for the feeling is no affectation or chimera. The mathematics afford no more absolute demonstrations than the sentiment of his art yields the artist. He not only believes, but positively knows, that such and such apparently arbitrary arrangements of matter constitute, and alone constitute, the true beauty. His reasons, however, have not yet been matured into expression. It remains for a more profound analysis than the world has yet seen fully to investigate and express them. Nevertheless he is confirmed in his instinctive opinions by the voice of all his brethren. Let a "composition" be defective ; let an emendation be wrought in its mere arrangement of form; let this emendation be submitted to every artist in the world; by each will its necessity be admitted. And even far more than this: in remedy of the defective composition, each insulated member of the fraternity would have suggested the identical emendation.

I repeat that in landscape arrangements alone is the physical nature susceptible of exaltation, and that, therefore, her susceptibility of improvement at this one point was a mystery I had been unable to solve.

My own thoughts on the subject had rested in the idea that the primitive intention of nature would have so arranged the earth's surface as to have fulfilled at all points man's sense of perfection in the beautiful, the sublime, or the picturesque; but that this primitive intention had been frustrated by the known geological disturbances - disturbances of form and colorgrouping, in the correction or allaying of which lies the soul of art. The force of this idea was much weakened, however, by the necessity which it involved of considering the disturbances abnormal and unadapted to any purpose. It was Ellison who suggested that they were prognostic of death. He thus explained:Admit the earthly immortality of man to have been the first intention. We have then the primitive arrangement of the earth's surface adapted to his blissful estate, as not existent but designed. The disturbances were the preparations for his subsequently conceived deathful condition.
" Now," said my friend, " what we regard as exaltation of the landscape may be really such, as respects only the moral or human point of view. Each alteration of the natural scenery may possibly effect a blemish in the picture, if we can suppose this picture viewed at large - in mass - from some point distant from the earth's surface, although not beyond the limits of its atmosphere. It is easily understood that what might improve a closely scrutinized detail may at the same time injure a general or more distantly observed effect. There may be a class of beings, human once, but now invisible to humanity, to whom, from afar, our disorder may seem order - our unpicturesqueness picturesque ; in a word, the earth-angels, for whose scrutiny more especially than our own, and
for whose death-refined appreciation of the beautiful, may have been set in array by God the wide landscapegardens of the hemispheres."

In the course of discussion, my friend quoted some passages from a writer on landscape-gardening, who has been supposed to have well treated his theme:
"There are properly but two styles of landscape-gardening, the natural and the artificial. One seeks to recall the original beauty of the country, by adapting its means to the surrounding scenery; cultivating trees in harmony with the hills or plain of the neighboring land; detecting and bringing into practice those nice relations of size, proportion, and color which, hid from the common observer, are revealed everywhere to the experienced student of nature. The result of the natural style of gardening is seen rather in the absence of all defects and incongruities, in the prevalence of a healthy harmony and order, than in the creation of any special wonders or miracles. The artificial style has as many varieties as there are different tastes to gratify. It has a certain general relation to the various styles of building. There are the stately avenues and retirements of Versailles; Italian terraces; and a various mixed old English style, which bears some relation to the domestic Gothic or English Elizabethan architecture. Whatever may be said against the abuses of the artificial landscape-gardening, a mixture of pure art in a garden scene adds to it a great beauty. This is partly pleasing to the eye, by the show of order and design, and partly moral. A terrace, with an old moss-covered balustrade, calls up at once to the eye the fair forms that have passed there in other days. The slightest exhibition of art is an evidence of care and human interest."
> "From what I have already observed," said Ellison, "you will understand that I reject the idea, here expressed, of recalling the original beauty of the
country. The original beauty is never so great as that which may be introduced. Of course, everything depends on the selection of a spot with capabilities. What is said about detecting and bringing into practice nice relations of size, proportion, and color, is one of those mere vaguenesses of speech which serve to veil inaccuracy of thought. The phrase quoted may mean anything, or nothing, and guides in no degree. That the true result of the natural style of gardening is seen rather in the absence of all defects and incongruities than in the creation of any special wonders or miracles, is a proposition better suited to the grovelling apprehension of the herd than to the fervid dreams of the man of genius. The negative merit suggested appertains to that hobbling criticism which, in letters, would elevate Addison into apotheosis. In truth, while that virtue which consists in the mere avoidance of vice appeals directly to the understanding, and can thus be circumscribed in rule, the loftier virtue, which flames in creation, can be apprehended in its results alone. Rule applies but to the merits of denial - to the excellences which refrain. Beyond these, the critical art can but suggest. We may be instructed to build a 'Cato,' but we are in vain told how to conceive a Parthenon or an Inferno. The thing done, however; the wonder accomplished, - and the capacity for apprehension becomes universal. The sophists of the negative school, who, through inability to create, have scoffed at creat:on, are now found the loudest in applause. What, in its chrysalis condition of principle, affronted their demure reason, never fails, in its maturity of accomplishment, to extort admiration from their instinct of beauty.
"The author's observations on the artificial style," continued Ellison, "are less objectionable. A mixture of pure art in a garden scene adds to it a great beauty. This is just; as also is the reference to the sense of human interest. The principle expressed is incontrovertible, but there may be something beyond it. There may be an object in keeping with the principle - an object unattainable by the means ordinarily possessed by individuals, yet which, if attained, would lend a charm to the landscape-garden far surpassing that which a sense of merely human interest could bestow. A poet, having very unusual pecuniary resources, might, while retaining the necessary idea of art, or culture, or, as our author expresses it, of interest, so imbue his designs at once with extent and novelty of beauty as to convey the sentiment of spiritual interference. It will be seen that, in bringing about such result, he secures all the advantages of interest or design, while relieving his work of the harshness or technicality of the worldly art. In the most rugged of wildernesses - in the most savage of the scenes of pure nature - there is apparent the art of a creator; yet this art is apparent to reflection only; in no respect has it the obvious force of a feeling. Now let us suppose this sense of the Almighty design to be one step depressed - to be brought into something like harmony or consistency with the sense of human art - to form an intermedium between the two: let us imagine, for example, a landscape whose combined vastness and definitiveness, whose united beauty, magnificence, and strangeness, shall convey the idea of care, or culture, or superintendence, on the part of beings superior, yet akin to humanity - then the sentiment of interest is preserved, while the art inter-
volved is made to assume the air of an intermediate or secondary nature : a nature which is not God, nor an emanation from God, but which still is nature in the sense of the handiwork of the angels that hover between man and God."

It was in devoting his enormous wealth to the embodiment of a vision such as this, in the free exercise in the open air insured by the personal superintendence of his plans, in the unceasing object which these plans afforded, in the high spirituality of the object, in the contempt of ambition which it enabled him truly to feel, in the perennial springs with which it gratified, without possibility of satiating, that one master passion of his soul, the thirst for beauty; above all, it was in the sympathy of a woman, not unwomanly, whose loveliness and love enveloped his existence in the purple atmosphere of Paradise, that Ellison thought to find, and found, exemption from the ordinary cares of humanity, with a far greater amount of positive happiness than ever glowed in the rapt day-dreams of De Staël.

I despair of conveying to the reader any distinct conception of the marvels which my friend did actually accomplish. I wish to describe, but am disheart. ened by the difficulty of description, and hesitate between detail and generality. Perhaps the better course will be to unite the two in their extremes.

Mr. Ellison's first step regarded, of course, the choice of a locality; and scarcely had he commenced thinking on this point, when the luxuriant nature of the Pacific Islands arrested his attention. In fact, he had made up his mind for a voyage to the South Seas, when a night's reflection induced him to abandon the idea. "Were I misanthropic," he said, "such a locale
would suit me. The thoroughness of its insulation and seclusion, and the difficulty of ingress and egress, would in such case be the charm of charms; but as yet I am not Timon. I wish the composure, but not the depression of solitude. There must remain with me a certain control over the extent and duration of my repose. There will be frequent hours in which I shall need, too, the sympathy of the poetic in what I have done. Let me seek, then, a spot not far from a populous city - whose vicinity, also, will best enable me to execute my plans."

In search of a suitable place so situated, Ellison travelled for several years, and I was permitted to accompany him. A thousand spots with which I was enraptured, he rejected without hesitation, for reasons which satisfied me, in the end, that he was right. We came at length to an elevated tableland of wonderful fertility and beauty, affording a panoramic prospect very little less in extent than that of Ætna, and, in Ellison's opinion as well as my own, surpassing the far-famed view from that mountain in all the true elements of the picturesque.
"I am aware," said the traveller, as he drew a sigh of deep delight after gazing on this scene, entranced for nearly an hour, "I know that here, in my circumstances, nine-tenths of the most fastidious of men would rest content. This panorama is indeed glorious, and I should rejoice in it but for the excess of its glory. The taste of all the architects I have ever known leads them, for the sake of 'prospect,' to put up buildings on hill-tops. The error is obvious. Grandeur in any of its moods, but especially in that of extent, startles, excites - and then fatigues, depresses. For the occasional scene nothing can be
better - for the constant view nothing worse. And, in the constant view, the most objectionable phase of grandeur is that of extent; the worst phase of extent, that of distance. It is at war with the sentiment and with the sense of seclusion - the sentiment and sense which we seek to humor in 'retiring to the country.' In looking from the summit of a mountain we cannot help feeling abroad in the world. The heart-sick avoid distant prospects as a pestilence."

It was not until toward the close of the fourth year of our search that we found a locality with which Ellison professed himself satisfied. It is, of course, needless to say zwhere was this locality. The late death of my friend, in causing his domain to be thrown open to certain classes of visitors, has given to Arnheim a species of secret and subdued if not solemn celebrity, similar in kind, although infinitely superior in degree, to that which so long distinguished Fonthill.

The usual approach to Arnheim was by the river. The visitor left the city in the early morning. During the forenoon he passed between shores of a tranquil and domestic beauty, on which grazed innumerable sheep, their white fleeces spotting the vivid green of rolling meadows. By degrees the idea of cultivation subsided into that of merely pastoral care. This slowly became merged in a sense of retirement - this again in a consciousness of solitude. As the evening approached, the channel grew more narrow ; the banks more and more precipitous; and these latter were clothed in richer, more profuse, and more sombre foliage. The water increased in transparency. The stream took a thousand turns, so that at no moment could its gleaming surface be seen for a greater dis106
tance than a furlong. At every instant the vessel seemed imprisoned within an enchanted circle, having insuperable and impenetrable walls of foliage, a roof of ultra-marine satin, and no floor - the keel balancing itself with admirable nicety on that of a phantom bark which, by some accident having been turned upside down, floated in constant company with the substantial one, for the purpose of sustaining it. The channel now became a gorge - although the term is somewhat inapplicable, and I employ it merely because the language has no word which better represents the most striking, not the most distinctive, feature of the scene. The character of gorge was maintained only in the height and parallelism of the shores; it was lost altogether in their other traits. The walls of the ravine (through which the clear water still tranquilly flowed) arose to an elevation of a hundred and occasionally of a hundred and fifty feet, and inclined so much toward each other as, in a great measure, to shut out the light of day; while the long plume-like moss, which depended densely from the intertwining shrubberies overhead, gave the whole chasm an air of funereal gloom. 'The windings became more frequent and intricate, and seemed often as if returning in upon themselves, so that the voyager had long lost all idea of direction. He was, moreover, enwrapt in an exquisite sense of the strange. The thought of nature still remained, but her character seemed to have undergone modification; there was a weird symmetry, a thrilling uniformity, a wizard propriety in these her works. Not a dead branch - not a withered leaf - not a stray pebble - not a patch of the brown earth was anywhere visible. The crystal water welled up against the clean granite, or the unblemished moss,
with a sharpness of outline that delighted while it bewildered the eye.

Having threaded the mazes of this channel for some hours, the gloom deepening every moment, a sharp and unexpected turn of the vessel brought it suddenly, as if dropped from heaven, into a circular basin of very considerable extent when compared with the width of the gorge. It was about two hundred yards in diameter, and girt in at all points but one - that immediately fronting the vessel as it entered-by hills equal in general height to the walls of the chasm, although of a thoroughly different character. Their sides sloped from the water's edge at an angle of some forty-five degrees, and they were clothed from base to summit - not a perceptible point escaping in a drapery of the most gorgeous flower-blossoms; scarcely a green leaf being visible among the sea of odorous and fluctuating color. This basin was of great depth, but so transparent was the water that the bottom, which seemed to consist of a thick mass of small round alabaster pebbles, was distinctly visible by glimpses : that is to say, whenever the eye could permit itself not to see, far down in the inverted heaven, the duplicate blooming of the hills. On these latter there were no trees, nor even shrubs of any size. The impressions wrought on the observer were those of richness, warmth, color, quietude, uniformity, softness, delicacy, daintiness, voluptuousness, and a miraculous extremeness of culture that suggested dreams of a new race of fairies, laborious, tasteful, magnificent, and fastidious; but as the eye traced upward the myriad-tinted slope, from its sharp junction with the water to its vague termination amid the folds of overhanging cloud, it became, indeed, difficult not
to fancy a panoramic cataract of rubies, sapphires, opals and golden onyxes, rolling silently out of the sky.

The visitor, shooting suddenly into this bay from out the gloom of the ravine, is delighted but astounded by the full orb of the declining sun, which he had supposed to be already far below the horizon, but which now confronts him, and forms the sole termination of an otherwise limitless vista seen through another chasm-like rift in the hills.

But here the voyager quits the vessel which has borne him so far, and descends into a light canoe of ivory, stained with arabesque devices in vivid scarlet, both within and without. The poop and beak of this boat rise high above the water, with sharp points, so that the general form is that of an irregular crescent. It lies on the surface of the bay with the proud grace of a swan. On its ermined floor reposes a single feathery paddle of satin-wood; but no oarsman or attendant is to be seen. The guest is bidden to be of good cheer - that the fates will take care of him. The larger vessel disappears, and he is left alone in the canoe, which lies apparently motionless in the middle of the lake. While he considers what course to pursue, however, he becomes aware of a gentle movement in the fairy bark. It slowly swings itself around until its prow points toward the sun. It advances with a gentle but gradually accelerated velocity, while the slight ripples it creates seem to break about the ivory sides in divinest melody - seem to offer the only possible explanation of the soothing yet melancholy music for whose unseen origin the bewildered voyager looks around him in vain.

The canoe steadily proceeds, and the rocky gate of the vista is approached, so that its depths can be more
distinctly seen. To the right arises a chain of lofty hills rudely and luxuriantly wooded. It is observed, however, that the trait of exquisite cleanness where the bank dips into the water, still prevails. There is not one token of the usual river débris. To the left the character of the scene is softer and more obviously artificial. Here the bank slopes upward from the stream in a very gentle ascent, forming a broad sward of grass of a texture resembling nothing so much as velvet, and of a brilliancy of green which would bear comparison with the tint of the purest emerald. This plateau varies in width from ten to three hundred yards; reaching from the river-bank to a wall, fifty feet high, which extends, in an infinity of curves, but following the general direction of the river, until lost in the distance to the westward. This wall is of one continuous rock, and has been formed by cutting perpendicularly the once rugged precipice of the stream's southern bank; but no trace of the labor has been suffered to remain. The chiselled stone has the hue of ages, and is profusely overhung and overspread with the ivy, the coral honeysuckle, the eglantine, and the clematis. The uniformity of the top and bottom lines of the wall is fully relieved by occasional trees of gigantic height, growing singly or in small groups, both along the plateau and in the domain behind the wall, but in close proximity to it; so that frequent limbs (of the black walnut especially) reach over and dip their pendent extremities into the water. Farther back within the domain, the vision is impeded by an impenetrable screen of foliage.

These things are observed during the canoe's gradual approach to what I have called the gate of the vista. On drawing nearer to this, however, its

chasm-like appearance vanishes; a new outlet from the bay is discovered to the left - in which direction the wall is also seen to sweep, still following the general course of the stream. Down this new opening the eye cannot penetrate very far; for the stream, accompanied by the wall, still bends to the left, until both are swallowed up by the leaves.

The boat, nevertheless, glides magically into the winding channel ; and here the shore opposite the wall is found to resemble that opposite the wall in the straight vista. Lofty hills, rising occasionally into mountains, and covered with vegetation in wild luxuriance, still shut in the scene.

Floating gently onward, but with a velocity slightly augmented, the voyager, after many short turns, finds his progress apparently barred by a gigantic gate or rather door of burnished gold, elaborately carved and fretted, and reflecting the direct rays of the now fastsinking sun with an effulgence that seems to wreathe the whole surrounding forest in flames. This gate is inserted in the lofty wall; which here appears to cross the river at right angles. In a few moments, however, it is seen that the main body of the water still sweeps in a gentle and extensive curve to the left, the wall following it as before, while a stream of considerable volume, diverging from the principal one, makes its way, with a slight ripple, under the door, and is thus hidden from sight. The canoe falls into the lesser channel and approaches the gate. Its ponderous wings are slowly and musically expanded. The boat glides between them, and commences a rapid descent into a vast amphitheatre entirely begirt with purple mountains, whose bases are laved by a gleaming river throughout the full extent of their circuit. Meantime
the whole Paradise of Arnheim bursts upon the view. There is a gush of entrancing melody; there is an oppressive sense of strange sweet odor; there is a dream-like intermingling to the eye of tall slender Eastern trees - bosky shrubberies - flocks of golden and crimson birds - lily-fringed lakes - meadows of violets, tulips, poppies, hyacinths, and tuberoses long intertangled lines of silver streamlets - and, upspringing confusedly from amid all, a mass of semiGothic, semi-Saracenic architecture, sustaining itself as if by miracle in mid-air; glittering in the red sunlight with a hundred oriels, minarets, and pinnacles; and seeming the phantom handiwork, conjointly, of the Sylphs, of the Fairies, of the Genii, and of the Gnomes.

## LANDOR'S COTTAGE

## A PENDANT to "the domain of arnheim."

DURING a pedestrian tour last summer, through one or two of the river counties of New York, I found myself, as the day declined, somewhat embarrassed about the road I was pursuing. The land undulated very remarkably; and my path, for the last hour, had wound about and about so confusedly, in its effort to keep in the valleys, that I no longer knew in what direction lay the sweet village of B - , where I had determined to stop for the night. The sun had scarcely shone - strictly speaking - during the day, which, nevertheless, had been unpleasantly warm. A smoky mist, resembling that of the Indian summer, enveloped all things, and, of course, added to my uncertainty. Not that I cared much about the matter. If I did not hit upon the village before sunset, or even before dark, it was more than possible that a little Dutch farmhouse, or something of that kind, would soon make its appearance - although, in fact, the neighborhood (perhaps on account of being more picturesque than fertile) was very sparsely inhabited. At all events, with my knapsack for a pillow, and my hound as a sentry, a bivouac in the open air was just the thing which would have amused me. I sauntered vol. in. -8 II3
on, therefore, quite at ease - Ponto taking charge of my gun - until at length, just as I had begun to consider whether the numerous little glades that led hither and thither were intended to be paths at all, I was conducted by one of the most promising of them into an unquestionable carriage-track. There could be no mistaking it. The traces of light wheels were evident; and although the tall shrubberies and overgrown undergrowth met overhead, there was no obstruction whatever below, even to the passage of a Virginian mountain wagon - the most aspiring vehicle, I take it, of its kind. The road, however, except in being open through the wood - if wood be not too weighty a name for such an assemblage of light trees - and except in the particulars of evident wheeltracks, bore no resemblance to any road I had before seen. The tracks of which I speak were but faintly perceptible, having been impressed upon the firm, yet pleasantly moist surface of - what looked more like green Genoese velvet than anything else. It was grass, clearly, but grass such as we seldom see out of England - so short, so thick, so even, and so vivid in color. Not a single impediment lay in the wheelroute, not even a chip or dead twig. The stones that once obstructed the way had been carefully placed, not thrown, along the sides of the lane, so as to define its boundaries at bottom with a kind of halfprecise, half-negligent, and wholly picturesque, definition. Clumps of wild flowers grew everywhere luxuriantly in the interspaces.

What to make of all this, of course I knew not. Here was art undoubtedly - that did not surprise me - all roads, in the ordinary sense, are works of art; nor can I say that there was much to wonder at
in the mere excess of art manifested; all that seemed to have been done might have been done here - with such natural "capabilities" (as they have it in the books on Landscape Gardening) - with very little labor and expense. No, it was not the amount, but the character of the art which caused me to take a seat on one of the blossomy stones and gaze up and down this fairylike avenue for half an hour or more in bewildered admiration. One thing became more and more evident the longer I gazed: an artist, and one with a most scrupulous eye for form, had superintended all these arrangements. The greatest care had been taken to preserve a due medium between the neat and graceful on the one hand, and the pittoresco, in the true sense of the Italian term, on the other. There were few straight, and no long uninterrupted, lines. The same effect of curvature or of color appeared twice, usually, but not oftener, at any one point of view. Everywhere was variety in uniformity. It was a piece of " composition," in which the most fastidiously critical taste could scarcely have suggested an emendation.

I had turned to the right as I entered this road, and now, arising, I continued in the same direction. The path was so serpentine that at no moment could I trace its course for more than two or three paces in advance. Its character did not undergo any material change.

Presently the murmur of water fell gently upon my ear; and in a few moments afterwards, as I turned with the road somewhat more abruptly than hitherto, I became aware that a building of some kind lay at the foot of a gentle declivity just before me. I could see nothing distinctly on account of the mist which occupied all the little valley below. A gentle breeze,
however, now arose, as the sun was about descending; and while I remained standing on the brow of the slope, the fog gradually became dissipated into wreaths, and so floated over the scene.

As it came fully into view - thus gradually as I describe it - piece by piece, here a tree, there a glimpse of water, and here again the summit of a chimney, I could scarcely help fancying that the whole was one of the ingenious illusions sometimes exhibited under the name of "vanishing pictures."

By the time, however, that the fog had thoroughly disappeared, the sun had made its way down behind the gentle hills, and thence, as if with a slight chassez to the south, had come again fully into sight; glaring with a purplish lustre through a chasm that entered the valley from the west. Suddenly, therefore - and as if by the hand of magic - this whole valley and everything in it became brilliantly visible.

The first coup d'cil, as the sun slid into the position described, impressed me very much as I have been impressed, when a boy, by the concluding scene of some well-arranged theatrical spectacle or melodrama. Not even the monstrosity of color was wanting; for the sunlight came out through the chasm, tinted all orange and purple; while the vivid green of the grass in the valley was reflected more or less upon all objects, from the curtain of vapor that still hung overhead, as if loath to take its total departure from a scene so enchantingly beautiful.

The little vale, into which I thus peered down from under the fog-canopy, could not have been more than four hundred yards long; while in breadth it varied from fifty to one hundred and fifty, or perhaps two hundred. It was most narrow at its northern extremity,
opening out as it tended southwardly, but with no very precise regularity. The widest portion was within eighty yards of the southern extreme. The slopes which encompassed the vale could not fairly be called hills, unless at their northern face. Here a precipitous ledge of granite arose to a height of some ninety feet; and, as I have mentioned, the valley at this point was not more than fifty feet wide; but as the visitor proceeded southwardly from this cliff, he found, on his right hand and on his left, declivities at once less high, less precipitous, and less rocky. All, in a word, sloped and softened to the south; and yet the whole vale was engirdled by eminences, more or less high, except at two points. One of these I have already spoken of. It lay considerably to the north of west, and was where the setting sun made its way, as I have before described, into the amphitheatre, through a cleanly cut natural cleft in the granite embankment: this fissure might have been ten yards wide at its widest point, so far as the eye could trace it. It seemed to lead up, up, like a natural causeway, into the recesses of unexplored mountains and forests. The other opening was directly at the southern end of the vale. Here, generally, the slopes were nothing more than gentle inclinations, extending from east to west about one hundred and fifty yards. In the middle of this extent was a depression, level with the ordinary floor of the valley. As regards vegetation, as well as in respect to everything else, the scene softened and sloped to the south. To the north - on the craggy precipice, a few paces from the verge upsprang the magnificent trunks of numerous hickories, black walnuts, and chestnuts, interspersed with occasional oak; and the strong lateral branches thrown
out by the walnuts, especially, spread far over the edge of the cliff. Proceeding southwardly, the explorer saw at first the same class of trees, but less and less lofty and Salvatorish in character; then he saw the gentler elm, succeeded by the sassafras and locust these again by the softer linden, red-bud, catalpa, and maple - these yet again by still more graceful and more modest varieties. The whole face of the southern declivity was covered with wild shrubbery alone, an occasional silver willow or white poplar excepted. In the bottom of the valley itself (for it must be borne in mind that the vegetation hitherto mentioned grew only on the cliffs or hillsides) were to be seen three insulated trees. One was an elm of fine size and exquisite form: it stood guard over the southern gate of the vale. Another was a hickory, much larger than the elm, and altogether a much finer tree, although both were exceedingly beautiful: it seemed to have taken charge of the north-western entrance, springing from a group of rocks in the very jaws of the ravine, and throwing its graceful body, at an angle of nearly forty-five degrees, far out into the sunshine of the amphitheatre. About thirty yards east of this tree stood, however, the pride of the valley, and beyond all question the most magnificent tree I have ever seen, unless, perhaps, among the cypresses of the Itchiatuckanee. It was a triple-stemmed tulip-tree the Liriodendron Tulipifera - one of the natural order of magnolias. Its three trunks separated from the parent at about three feet from the soil, and, diverging very slightly and gradually, were not more than four feet apart at the point where the largest stem shot out into foliage; this was at an elevation of about eighty feet. The whole height of the principal
division was one hundred and twenty feet. Nothing can surpass in beauty the form, or the glossy, vivid green of the leaves of the tulip-tree. In the present instance they were fully eight inches wide; but their glory was altogether eclipsed by the gorgeous splendor of the profuse blossoms. Conceive, closely congregated, a million of the largest and most resplendent tulips! Only thus can the reader get any idea of the picture I would convey. And then the stately grace of the clean, delicately-granulated columnar stems, the largest four feet in diameter, at twenty from the ground. The innumerable blossoms, mingling with those of other trees scarcely less beautiful, although infinitely less majestic, filled the valley with more than Arabian perfumes.

The general floor of the amphitheatre was grass of the same character as that I had found in the road: if anything, more deliciously soft, thick, velvety, and miraculously green. It was hard to conceive how all this beauty had been attained.

I have spoken of the two openings into the vale. From the one to the north-west issued a rivulet, which came, gently murmuring and slightly foaming, down the ravine, until it dashed against the group of rocks out of which sprang the insulated hickory. Here, after encircling the tree, it passed on, a little to the north of east, leaving the tulip-tree some twenty feet to the south, and making no decided alteration in its course until it came near the midway between the eastern and western boundaries of the valley. At this point, after a series of sweeps, it turned off at right angles and pursued a generally southern direction meandering as it went - until it became lost in a small lake of irregular figure (although roughly oval) that
lay gleaming near the lower extremity of the vale. This lakelet was, perhaps, a hundred yards in diameter at its widest part. No crystal could be clearer than its waters. Its bottom, which could be distinctly seen, consisted altogether of pebbles brilliantly white. Its banks, of the emerald grass already described, rounded, rather than sloped, off into the clear heaven below; and so clear was this heaven, so perfectly, at times, did it reflect all objects above it, that where the true bank ended and where the mimic one commenced, it was a point of no little difficulty to determine. The trout, and some other varieties of fish, with which this pond seemed to be almost inconveniently crowded, had all the appearance of veritable flying-fish. It was almost impossible to believe that they were not absolutely suspended in the air. A light birch canoe, that lay placidly on the water, was reflected in its minutest fibres with a fidelity unsurpassed by the most exquisitely polished mirror. A small island, fairly laughing with flowers in full bloom, and affording little more space than just enough for a picturesque little building, seemingly a fowl-house, arose from the lake not far from its northern shore, to which it was connected by means of an inconceivably light-looking and yet very primitive bridge. It was formed of a single broad and thick plank of the tulip wood. This was forty feet long, and spanned the interval between shore and shore with a slight but very perceptible arch, preventing all oscillation. From the southern extreme of the lake issued a continuation of the rivulet, which, after meandering for perhaps thirty yards, finally passed through the "depression" (already described) in the middle of the southern declivity, and tumbling down a sheer precipice of a
hundred feet, made its devious and unnoticed way to the Hudson.

The lake was deep - at some points thirty feetbut the rivulet seldom exceeded three, while its greatest width was about eight. Its bottom and banks were as those of the pond; if a defect could have been attributed to them, in point of picturesqueness, it was that of excessive neatness.

The expanse of the green turf was relieved, here and there, by an occasional showy shrub, such as the hydrangea, or the common snowball, or the aromatic syringa; or, more frequently, by a clump of geraniums blossoming gorgeously in great varieties. These latter grew in pots which were carefully buried in the soil, so as to give the plants the appearance of being indigenous. Besides all this, the lawn's velvet was exquisitely spotted with sheep - a considerable flock of which roamed about the vale, in company with three tamed deer, and a vast number of brilliantly-plumed ducks. A very large mastiff seemed to be in vigilant attendance upon these animals, each and all.

Along the eastern and western cliffs - where, towards the upper portion of the amphitheatre, the boundaries were more or less precipitous - grew ivy in great profusion, so that only here and there could even a glimpse of the naked rock be obtained. The northern precipice, in like manner, was almost entirely clothed by grape-vines of rare luxuriance ; some spring. ing from the soil at the base of the cliff, and others from ledges on its face.

The slight elevation which formed the lower boundary of this little domain was crowned by a neat stone wall, of sufficient height to prevent the escape of the deer. Nothing of the fence kind was observable else-
where; for nowhere else was an artificial enclosure needed: - any stray sheep, for example, which should attempt to make its way out of the vale by means of the ravine, would find its progress arrested, after a few yards' advance, by the precipitous ledge of rock over which tumbled the cascade that had arrested my attention as I first drew near the domain. In short, the only ingress or egress was through a grate occupying a rocky pass in the road, a few paces below the point at which I stopped to reconnoitre the scene.

I have described the brook as meandering very irregularly through the whole of its course. Its two general directions, as I have said, were first from west to east, and then from north to south. At the turn, the stream, sweeping backwards, made an almost circular loop, so as to form a peninsula which was very nearly an island, and which included about the sixteenth of an acre. On this peninsula stood a dwell-ing-house - and when I say that this house, like the infernal terrace seen by Vathek, "était d"une architecture inconnue dans les annales de la terre," I mean, merely, that its tout ensemble struck me with the keenest sense of combined novelty and propriety -in a word, of poetry (for, than in the words just employed, I could scarcely give, of poetry in the abstract, a more rigorous definition)- and I do not mean that the merely outré was perceptible in any respect.

In fact, nothing could well be more simple, more utterly unpretending, than this cottage. Its marvellous effect lay altogether in its artistic arrangement as a picture. I could have fancied, while I looked at it, that some eminent landscape-painter had built it with his brush.

The point of view from which I first saw the valley
was not altogether, although it was nearly, the best point from which to survey the house. I will therefore describe it as I afterwards saw it, from a position on the stone wall at the southern extreme of the amphitheatre.

The main building was about twenty-four feet long, and sixteen broad - certainly not more. Its total height, from the ground to the apex of the roof, could not have exceeded eighteen feet. To the west end of this structure was attached one about a third smaller in all its proportions: - the line of its front standing back about two yards from that of the larger house ; and the line of its roof, of course, being considerably depressed below that of the roof adjoining. At right angles to these buildings, and from the rear of the main one, not exactly in the middle, extended a third compartment, very small - being, in general, one third less than the western wing. The roofs of the two larger were very steep: sweeping down from the ridge-beam with a long concave curve, and extending at least four feet beyond the walls in front, so as to form the roofs of two piazzas. These latter roofs, of course, needed no support ; but as they had the air of needing it, slight and perfectly plain pillars were inserted at the corners alone. The roof of the northern wing was merely an extension of a portion of the main roof. Between the chief building and western wing arose a very tall and rather slender square chimney of hard Dutch bricks, alternately black and red ; a slight cornice of projecting bricks at the top. Over the gables, the roofs also projected very much; in the main building, about four feet to the east and two to the west. The principal door was not exactly in the main division, being a little to the east, while the two windows were to the west.

These latter did not extend to the floor, but were much longer and narrower than usual ; they had single shutters like doors; the panes were of lozenge form, but quite large. The door itself had its upper half of glass, also in lozenge panes; a movable shutter secured it at night. The door to the west wing was in its gable, and quite simple; a single window looked out to the south. There was no external door to the north wing, and it, also, had only one window to the east.

The blank wall of the eastern gable was relieved by stairs (with a balustrade) running diagonally across it, the ascent being from the south. Under cover of the widely projecting eave these steps gave access to a door leading into the garret, or rather loft, for it was lighted only by a single window to the north, and seemed to have been intended as a store-room.

The piazzas of the main building and western wing had no floors, as is usual; but at the doors and at each window, large, flat, irregular slabs of granite lay imbedded in the delicious turf, affording comfortable footing in all weather. Excellent paths of the same material, not nicely adapted, but with the velvety sod filling frequent intervals between the stones, led hither and thither from the house, to a crystal spring about five paces off, to the road, or to one or two out-houses that lay to the north, beyond the brook, and were thoroughly concealed by a few locusts and catalpas.

Not more than six steps from the main door of the cottage stood the dead trunk of a fantastic pear-tree, so clothed from head to foot in the gorgeous bignonia blossoms that one required no little scrutiny to determine what manner of sweet thing it could be. From various arms of this tree hung cages of different kinds.

In one, a large wicker cylinder with a ring at top, revelled a mocking-bird; in another, an oriole; in a third, the impudent bobolink - while three or four more delicate prisons were loudly vocal with canaries.

The pillars of the piazza were enwreathed in jasmine and sweet honeysuckle; while from the angle formed by the main structure and its west wing, in front, sprang a grapevine of unexampled luxuriance. Scorning all restraint, it had clambered first to the lower roof - then to the higher; and along the ridge of this latter it continued to writhe on, throwing out tendrils to the right and left, until at length it fairly attained the east gable, and fell trailing over the stairs.

The whole house, with its wings, was constructed of the old-fashioned Dutch shingles - broad, and with unrounded corners. It is a peculiarity of this material to give houses built of it the appearance of being wider at bottom than at top, after the manner of Egyptian architecture ; and in the present instance this exceedingly picturesque effect was aided by numerous pots of gorgeous flowers that almost encompassed the base of the buildings.

The shingles were painted a dull gray; and the happiness with which this neutral tint melted into the vivid green of the tulip-tree leaves that partially overshadowed the cottage, can readily be conceived by an artist.

From the position near the stone wall, as described, the buildings were seen at great advantage; for the south-eastern angle was thrown forward, so that the eye took in at once the whole of the two fronts, with the picturesque eastern gable, and at the same time obtained just a sufficient glimpse of the northern
wing, with parts of a pretty roof to the spring-house, and nearly half of a light bridge that spanned the brook in the near vicinity of the main buildings.

I did not remain very long on the brow of the hill, although long enough to make a thorough survey of the scene at my feet. It was clear that I had wandered from the road to the village, and I had thus good traveller's excuse to open the gate before me, and inquire my way, at all events ; so, without more ado, I proceeded.

The road, after passing the gate, seemed to lie upon a natural ledge, sloping gradually down along the face of the north-eastern cliffs. It led me on to the foot of the northern precipice, and thence over the bridge, round by the eastern gable to the front door. In this progress, I took notice that no sight of the out-houses could be obtained.

As I turned the corner of the gable, the mastiff bounded towards me in stern silence, but with the eye and the whole air of a tiger. I held him out my hand, however, in token of amity, and I never yet knew the dog who was proof against such an appeal to his courtesy. He not only shut his mouth and wagged his tail, but absolutely offered me his paw afterwards extending his civilities to Ponto.

As no bell was discernible, I rapped with my stick against the door, which stood half open. Instantly a figure advanced to the threshold - that of a young woman about twenty-eight years of age - slender, or rather slight, and somewhat above the medium height. As she approached, with a certain modest decision of step altogether indescribable, I said to myself, "Surely here I have found the perfection of natural, in contradistinction from artificial, grace." The second im-
pression which she made on me, but by far the more vivid of the two, was that of enthusiasm. So intense an expression of romance, perhaps I should call it, or of unworldliness, as that which gleamed from her deep-set eyes, had never so sunk into my heart of hearts before. I know not how it is, but this peculiar expression of the eye, wreathing itself occasionally into the lips, is the most powerful, if not absolutely the sole, spell which rivets my interest in woman. "Romance," provided my readers fully comprehend what I would here imply by the word - "romance" and "womanliness" seem to me convertible terms: and, after all, what man truly loves in woman, is, simply, her womanhood. The eyes of Annie (I heard some one from the interior call her " Annie, darling !") were "spiritual gray;" her hair, a light chestnut: this is all I had time to observe of her.

At her most courteous of invitations, I entered passing first into a tolerably wide vestibule. Having come mainly to observe, I took notice that to my right, as I stepped in, was a window, such as those in front of the house; to the left, a door leading into the principal room; while, opposite me, an open door enabled me to see a small apartment, just the size of the vestibule, arranged as a study, and having a large bowwindow looking out to the north.

Passing into the parlor, I found myself with Mr. Landor - for this, I afterwards found, was his name. He was civil, even cordial in his manner; but just then I was more intent on observing the arrangements of the dwelling which had so much interested me, than the personal appearance of the tenant.

The north wing, I now saw, was a bedchamber; its door opened into the parlor. West of this door was a
single window, looking towards the brook. At the west end of the parlor, were a fireplace and a door leading into the west wing - probably a kitchen.

Nothing could be more rigorously simple than the furniture of the parlor. On the floor was an ingrain carpet, of excellent texture - a white ground, spotted with small circular green figures. At the windows were curtains of snowy white jaconet muslin: they were tolerably full, and hung decisively, perhaps rather formally, in sharp, parallel plaits to the floor just to the floor. The walls were papered with a French paper of great delicacy - a silver ground, with a faint green cord running zigzag throughout. Its expanse was relieved merely by three of Julien's exquisite lithographs d trois crayons, fastened to the wall without frames. One of these drawings was a scene of Oriental luxury, or rather voluptuousness; another was a " carnival piece," spirited beyond compare; the third was a Greek female head: - a face so divinely beautiful, and yet of an expression so provokingly indeterminate, never before arrested my attention.

The more substantial furniture consisted of a round table, a few chairs (including a large rocking-chair), and a sofa, or rather "settee :" its material was plain maple painted a creamy white, slightly interstriped with green - the seat of cane. The chairs and table were "to match;" but the forms of all had evidently been designed by the same brain which planned "the grounds:" it is impossible to conceive anything more graceful.

On the table were a few books; a large, square, crystal bottle of some novel perfume ; a plain, groundglass astral (not solar) lamp, with an Italian shade;
and a large vase of resplendently-blooming flowers. Flowers indeed, of gorgeous colors and delicate odor, formed the sole mere decoration of the apartment. The fireplace was nearly filled with a vase of brilliant geranium. On a triangular shelf in each angle of the room stood also a similar vase, varied only as to its lovely contents. One or two smaller bouquets adorned the mantel; and late violets clustered about the open windows.

It is not the purpose of this work to do more than give, in detail, a picture of Mr. Landor's residence as I found it.

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## III

TALES OF PSEUDO-SCIENCE

## TALES OF PSEUDO-SCIENCE

## THE UNPARALLELED ADVENTURE OF ONE HANS PFAALL

> With a heart of furious fancies, Whereof I am commander, With a burning spear and a horse of air, To the wilderness I wander.

Tom O'Bedlam's Song.
By late accounts from Rotterdam, that city seems to be in a high state of philosophical excitement. Indeed, phenomena have there occurred of a nature so completely unexpected, so entirely novel, so utterly at variance with preconceived opinions, as to leave no doubt on my mind that long ere this all Europe is in an uproar, all physics in a ferment, all reason and astronomy together by the ears.

It appears that on the -_ day of - (I am not positive about the date), a vast crowd of people, for purposes not specifically mentioned, were assembled in the great square of the Exchange in the well-conditioned city of Rotterdam. The day was warm unusually so for the season; there was hardly a breath of air stirring; and the multitude were in no bad humor at being now and then besprinkled with friendly showers of momentary duration, that fell from large white masses of cloud profusely distributed about the
blue vault of the firmament. Nevertheless, about noon, a slight but remarkable agitation became apparent in the assembly; the clattering of ten thousand tongues succeeded; and, in an instant afterwards, ten thousand faces were upturned towards the heavens, ten thousand pipes descended simultaneously from the corners of ten thousand mouths, and a shout, which could be compared to nothing but the roaring of Niagara, resounded long, loudly, and furiously through all the city and through all the environs of Rotterdam.

The origin of this hubbub soon became sufficiently evident. From behind the huge bulk of one of those sharply defined masses of cloud already mentioned, was seen slowly to emerge into an open area of blue space, a queer, heterogeneous, but apparently solid substance, so oddly shaped, so whimsically put together, as not to be in any manner comprehended, and never to be sufficiently admired, by the host of sturdy burghers who stood open-mouthed below. What could it be? In the name of all the devils in Rotterdam, what could it possibly portend? No one knew; no one could imagine; no one - not even the burgomaster Mynheer Superbus Von Underduk had the slightest clew by which to unravel the mystery; so, as nothing more reasonable could be done, every one to a man replaced his pipe carefully in the corner of his mouth, and, maintaining an eye steadily upon the phenomenon, puffed, paused, waddled about, and grunted significantly - then waddled back, grunted, paused, and finally - puffed again.

In the mean time, however, lower and still lower towards the goodly city, came the object of so much curiosity, and the cause of so much smoke. In a very
few minutes it arrived near enough to be accurately discerned. It appeared to be - yes! it was undoubtedly a species of balloon; but surely no such balloon had ever been seen in Rotterdam before. For who, let me ask, ever heard of a balloon manufactured entirely of dirty newspapers? No man in Holland certainly; yet here, under the very noses of the people, or rather at some distance above their noses, was the identical thing in question, and composed, I have it on the best authority, of the precise material which no one had ever before known to be used for a similar purpose. It was an egregious insult to the good sense of the burghers of Rotterdam. As to the shape of the phenomenon, it was even still more reprehensible, being little or nothing better than a huge fool's-cap turned upside down. And this similitude was regarded as by no means lessened when, upon nearer inspection, the crowd saw a large tassel depending from its apex, and, around the upper rim or base of the cone, a circle of little instruments resembling sheep-bells, which kept up a continual tinkling to the tune of "Betty Martin." But still worse. - Suspended by blue ribbons to the end of this fantastic machine, there hung, by way of car, an enormous drab beaver hat, with a brim superlatively broad, and a hemispherical crown with a black band and a silver buckle. It is, however, somewhat remarkable that many citizens of Rotterdam swore to having seen the same hat repeatedly before; and indeed the whole assembly seemed to regard it with eyes of familiarity; while the vrouw Grettel Pfaall, upon sight of it, uttered an exclamation of joyful surprise, and declared it to be the identical hat of her good man himself. Now this was a circumstance the more to
be observed, as Pfaall, with three companions, had actually disappeared from Rotterdam about five years before, in a very sudden and unaccountable manner, and up to the date of this narrative all attempts at obtaining intelligence concerning them had failed. To be sure, some bones which were thought to be human, mixed up with a quantity of odd-looking rubbish, had been lately discovered in a retired situation to the east of the city; and some people went so far as to imagine that in this spot a foul murder had been committed, and that the sufferers were in all probability Hans Pfaall and his associates. - But to return.

The balloon (for such no doubt it was) had now descended to within a hundred feet of the earth, allowing the crowd below a sufficiently distinct view of the person of its occupant. This was in truth a very singular somebody. He could not have been more than two feet in height; but this altitude, little as it was, would have been sufficient to destroy his equilibrium, and tilt him over the edge of his tiny car, but for the intervention of a circular rim reaching as high as the breast, and rigged on to the cords of the balloon. The body of the little man was more than proportionally broad, giving to his entire figure a rotundity highly absurd. His feet, of course, could not be seen at all. His hands were enormously large. His hair was gray, and collected into a queue behind. His nose was prodigiously long, crooked, and inflammatory; his eyes full, brilliant, and acute; his chin and cheeks, although wrinkled with age, were broad, puffy, and double; but of ears of any kind there was not a semblance to be discovered upon any portion of his head. This odd little gentleman was
dressed in a loose surtout of sky-blue satin, with tight breeches to match, fastened with silver buckles at the knees. His vest was of some bright yellow material; a white taffety cap was set jauntily on one side of his head; and, to complete his equipment, a blood-red silk handkerchief enveloped his throat, and fell down, in a dainty manner, upon his bosom, in a fantastic bow-knot of super-eminent dimensions.

Having descended, as I said before, to about one hundred feet from the surface of the earth, the little old gentleman was suddenly seized with a fit of trepidation, and appeared disinclined to make any nearer approach to terra firma. Throwing out, therefore, a quantity of sand from a canvas bag, which he lifted with great difficulty, he became stationary in an instant. He then proceeded, in a hurried and agitated manner, to extract from a side-pocket in his surtout a large morocco pocketbook. This he poised suspiciously in his hand; then eyed it with an air of extreme surprise, and was evidently astonished at its weight. He at length opened it, and, drawing therefrom a huge letter sealed with red sealing-wax and tied carefully with red tape, let it fall precisely at the feet of the burgomaster Superbus Von Underduk. His Excellency stooped to take it up. But the aeronaut, still greatly discomposed, and having apparently no further business to detain him in Rotterdam, began at this moment to make busy preparations for departure; and, it being necessary to discharge a portion of ballast to enable him to reascend, the half-dozen bags which he threw out, one after another, without taking the trouble to empty their contents, tumbled, every one of them, most unfortu-
mately, upon the back of the burgomaster, and rolled him over and over no less than half a dozen times, in the face of every individual in Rotterdam. It is not to be supposed, however, that the great Underduk suffered this impertinence on the part of the little old man to pass off with impunity. It is said, on the contrary, that during each of his halfdozen circumvolutions he emitted no less than half a dozen distinct and furious whiffs from his pipe, to which he held fast the whole time with all his might, and to which he intends holding fast (God willing) until the day of his decease.

In the mean time the balloon arose like a lark, and, soaring far away above the city, at length drifted quietly behind a cloud similar to that from which it had so oddly emerged, and was thus lost forever to the wondering eyes of the good citizens of Rotterdam. All attention was now directed to the letter, the descent of which, and the consequences attending thereupon, had proved so fatally subversive of both person and personal dignity to his Excellency, Von Underduk. That functionary, however, had not failed, during his circumgyratory movements, to bestow a thought upon the important object of securing the epistle, which was seen, upon inspection, to have fallen into the most proper hands, being actually addressed to himself and Professor Rubadub, in their official capacities of President and Vice-President of the Rotterdam College of Astronomy. It was accordingly opened by those dignitaries upon the spot, and found to contain the following extraordinary, and indeed very serious, communication:-

To their Excellencies Von Underduk and Ruba. dub, President and Vice-President of the States' College of Astronomers, in the city of Rotterdam.

Your Excellencies may perhaps be able to remember an humble artisan, by name Hans Pfaall, and by occupation a mender of bellows, who, with three others, disappeared from Rotterdam, about five years ago, in a manner which must have been considered unaccountable. If, however, it so please your Excellencies, I, the writer of this communication, am the identical Hans Pfaall himself. It is well known to most of my fellow-citizens that for the period of forty years I continued to occupy the little square brick building, at the head of the alley called Sauerkraut, in which I resided at the time of my disappearance. My ancestors have also resided therein time out of mind - they, as well as myself, steadily following the respectable and indeed lucrative profession of mending of bellows: for, to speak the truth, until of late years that the heads of all the people have been set agog with politics, no better business than my own could an honest citizen of Rotterdam either desire or deserve. Credit was good, employment was never wanting, and there was no lack of either money or good-will. But, as I was saying, we soon began to feel the effects of liberty, and long speeches, and radicalism, and all that sort of thing. People who were formerly the very best customers in the world had now not a moment of time to think of us at all. They had as much as they could do to read about the revolutions, and keep up with the march of intellect and the spirit of the age. If a fire wanted fanning, it could readily be fanned with a newspaper ;
and as the government grew weaker, I have no doubt that leather and iron acquired durability in proportion - for, in a very short time, there was not a pair of bellows in all Rotterdam that ever stood in need of a stitch or required the assistance of a hammer. This was a state of things not to be endured. I soon grew as poor as a rat, and, having a wife and children to provide for, my burdens at length became intolerable, and I spent hour after hour in reflecting upon the most convenient method of putting an end to my life. Duns, in the mean time, left me little leisure for contemplation. My house was literally besieged from morning till night. There were three fellows in particular, who worried me beyond endurance, keeping watch continually about my door, and threatening me with the law. Upon these three I vowed the bitterest revenge, if ever I should be so happy as to get them within my clutches; and I believe nothing in the world but the pleasure of this anticipation prevented me from putting my plan of suicide into immediate execution, by blowing my brains out with a blunderbuss. I thought it best, however, to dissemble my wrath, and to treat them with promises and fair words, until, by some good turn of fate, an opportunity of vengeance should be afforded me.

One day, having given them the slip, and feeling more than usually dejected, I continued for a long time to wander about the most obscure streets without object, until at length I chanced to stumble against the corner of a bookseller's stall. Seeing a chair close at hand, for the use of customers, I threw myself doggedly into it, and, hardly knowing why, opened the pages of the first volume which came within my reach. It proved to be a small pamphlet
treatise on Speculative Astronomy, written either by Professor Encke of Berlin, or by a Frenchman of somewhat similar name. I had some little tincture of information on matters of this nature, and soon became more and more absorbed in the contents of the book - reading it actually through twice before I awoke to a recollection of what was passing around me. By this time it began to grow dark, and I directed my steps toward home. But the treatise (in conjunction with a discovery in pneumatics, lately communicated to me as an important secret, by a cousin from Nantz) had made an indelible impression on my mind, and, as I sauntered along the dusky streets, I revolved carefully over in my memory the wild and sometimes unintelligible reasonings of the writer. There are some particular passages which affected my imagination in an extraordinary manner. The longer I meditated upon these, the more intense grew the interest which had been excited within me. The limited nature of my education in general, and more especially my ignorance on subjects connected with natural philosophy, so far from rendering me diffident of my own ability to comprehend what I had read, or inducing me to mistrust the many vague notions which had arisen in consequence, merely served as a farther stimulus to imagination; and I was vain enough, or perhaps reasonable enough, to doubt whether those crude ideas which, arising in ill-regulated minds, have all the appearance, may not often in effect possess all the force, the reality, and other inherent properties of instinct or intuition.

It was late when I reached home, and I went immediately to bed. My mind, however, was too much occupied to sleep, and I lay the whole night buried
in meditation. Arising early in the morning, I repaired eagerly to the bookseller's stall, and laid out what little ready money I possessed, in the purchase of some volumes of Mechanics and Practical Astronomy. Having arrived at home safely with these, I devoted every spare moment to their perusal, and soon made such proficiency in studies of this nature as I thought sufficient for the execution of a certain design with which either the devil or my better genius had inspired me. In the intervals of this period, I made every endeavor to conciliate the three creditors who had given me so much annoyance. In this I finally succeeded - partly by selling enough of my household furniture to satisfy a moiety of their claim, and partly by a promise of paying the balance upon completion of a little project which I told them I had in view, and for assistance in which I solicited their services. By these means (for they were ignorant men) I found little difficulty in gaining them over to my purpose.

Matters being thus arranged, I contrived, by the aid of my wife, and with the greatest secrecy and caution, to dispose of what property I had remaining, and to borrow in small sums, under various pretences, and without giving any attention (I am ashamed to say) to my future means of repayment, no inconsiderable quantity of ready money. With the means thus accruing I proceeded to procure, at intervals, cambric muslin, very fine, in pieces of twelve yards each; twine; a lot of the varnish of caoutchouc; a large and deep basket of wicker-work, made to order; and several other articles necessary in the construction and equipment of a balloon of extraordinary dimensions. This I directed my wife to make up as soon as possible,
and gave her all requisite information as to the particular method of proceeding. In the mean time I worked up the twine into network of sufficient dimensions; rigged it with a hoop and the necessary cords; and made purchase of numerous instruments and materials for experiment in the upper regions of the upper atmosphere. I then took opportunities of conveying by night, to a retired situation east of Rotterdam, five iron-bound casks, to contain about fifty gallons each, and one of a larger size; six tin tubes, three inches in diameter, properly shaped, and ten feet in length; a quantity of a particular metallic substance, or semi-metal which I shall not name, and a dozen demijohns of a very common acid. The gas to be formed from these latter materials is a gas never yet generated by any other person than myself - or at least never applied to any similar purpose. I can only venture to say here, that it is a constituent of azote, so long considered irreducible, and that its density is about 37.4 times less than that of hydrogen. It is tasteless, but not odorless; burns, when pure, with a greenish flame, and is instantaneously fatal to animal life. Its full secret I would make no difficulty in disclosing, but that it of right belongs (as I have before hinted) to a citizen of Nantz, in France, by whom it was conditionally communicated to myself. The same individual submitted to me, without being at all aware of my intentions, a method of constructing balloons from the membrane of a certain animal, through which substance any escape of gas was nearly an impossibility. I found it, however, altogether too expensive, and was not sure, upon the whole, whether cambric muslin, with a coating of gum caoutchouc, was not equally as good. I mention this circumstance, because

I think it probable that hereafter the individual in question may attempt a balloon ascension with the novel gas and material I have spoken of, and I do not wish to deprive him of the honor of a very singular invention.

On the spot which I intended each of the smaller casks to occupy respectively during the inflation of the balloon, I privately dug a small hole; the holes forming in this manner a circle twenty-five feet in diameter. In the centre of this circle, being the station designed for the large cask, I also dug a hole of greater depth. In each of the five smaller holes, I deposited a canister containing fifty pounds, and in the larger one a keg holding one hundred and fifty pounds of cannon powder. These - the keg and the canisters - I connected in a proper manner with covered trains; and having let into one of the canisters the end of about four feet of slow-match, I covered up the hole, and placed the cask over it, leaving the other end of the match protruding about an inch, and barely visible beyond the cask. I then filled up the remaining holes, and placed the barrels over them in their destined situation.

Besides the articles above enumerated, I conveyed to the dépôt, and there secreted, one of M. Grimm's improvements upon the apparatus for condensation of the atmospheric air. I found this machine, however, to require considerable alteration before it could be adapted to the purposes to which I intended making it applicable. But, with severe labor and unremitting perseverance, I at length met with entire success in all my preparations. My balloon was soon completed. It would contain more than forty thousand cubic feet of gas; would take me up easily, I calculated, with all my
implements, and, if I managed rightly, with one hun. dred and seventy-five pounds of ballast into the bargain. It had received three coats of varnish, and I found the cambric muslin to answer all the purposes of silk itself, being quite as strong and a good deal less expensive.

Everything being now ready, I exacted from my wife an oath of secrecy in relation to all my actions from the day of my first visit to the bookseller's stall; and promising, on my part, to return as soon as circumstances would permit, I gave her what little money I had left, and bade her farewell. Indeed, I had no fear on her account. She was what people call a notable woman, and could manage matters in the world without my assistance. I believe, to tell the truth, she always looked upon me as an idle body a mere make-weight, good for nothing but building castles in the air - and was rather glad to get rid of me. It was a dark night when I bade her good-by, and taking with me, as aides-de-camp, the three creditors who had given me so much trouble, we carried the balloon, with the car and accoutremerts, by a roundabout way, to the station where the other articles were deposited. We there found them all unmolested, and I proceeded immediately to business.

It was the first of April. The night, as I said before, was dark; there was not a star to be seen; and a drizzling rain, falling at intervals, rendered us very uncomfortable. But my chief anxiety was concerning the balloon, which, in spite of the varnish with which it was defended, began to grow rather heavy with the moisture; the powder also was liable to damage. I therefore kept my three duns working with great diligence, pounding down ice around the

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central cask, and stirring the acid in the others. They did not cease, however, importuning me with questions as to what I intended to do with all this apparatus, and expressed much dissatisfaction at the terrible labor I made them undergo. They could not perceive (so they said) what good was likely to result from their getting wet to the skin, merely to take a part in such horrible incantations. I began to get uneasy, and worked away with all my might; for I verily believe the idiots supposed that I had entered into a compact with the devil, and that, in short, what I was now doing was nothing better than it should be. I was, therefore, in great fear of their leaving me altogether. I contrived, however, to pacify them by promises of payment of all scores in full, as soon as I could bring the present business to a termination. To these speeches they gave, of course, their own interpretation; fancying, no doubt, that at all events I should come into possession of vast quantities of ready money ; and provided I paid them all I owed, and a trifle more, in consideration of their services, I dare say they cared very little what became of either my soul or my carcass.

In about four hours and a half I found the balloon sufficiently inflated. I attached the car, therefore, and put all my implements in it - a telescope; a barometer, with some important modifications; a thermometer; an electrometer; a compass; a magnetic needle; a seconds watch; a bell; a speaking-trumpet, etc., etc., etc. - also a globe of glass, exhausted of air, and carefully closed with a stopper - not forgetting the condensing apparatus, some unslacked lime, a stick of sealing-wax, a copious supply of water, and a large quantity of provisions, such as pemmican, 146
in which much nutriment is contained in comparatively little bulk. I also secured in the car a pair of pigeons and a cat.

It was now nearly daybreak, and I thought it high time to take my departure. Dropping a lighted cigar on the ground, as if by accident, I took the opportunity, in stooping to pick it up, of igniting privately the piece of slow-match, the end of which, as I said before, protruded a little beyond the lower rim of one of the smaller casks. This manœuvre was totally unperceived on the part of the three duns; and, jumping into the car, I immediately cut the single cord which held me to the earth, and was pleased to find that I shot upwards with inconceivable rapidity, carrying with all ease one hundred and seventy-five pounds of leaden ballast, and able to have carried up as many more. As I left the earth, the barometer stood at thirty inches, and the centigrade thermometer at $19^{\circ}$.

Scarcely, however, had I attained the height of fifty yards, when, roaring and rumbling up after me in the most tumultuous and terrible manner, came so dense a hurricane of fire, and gravel, and burning wood, and blazing metal, and mangled limbs, that my very heart sunk within me, and I fell down in the bottom of the car, trembling with terror. Indeed, I now perceived that I had entirely overdone the business, and that the main consequences of the shock were yet to be experienced. Accordingly, in less than a second, I felt all the blood in my body rushing to my temples, and, immediately thereupon, a concussion, which I shall never forget, burst abruptly through the night, and seemed to rip the very firmament asunder. When I afterwards had time for reflection, I did not fail to attribute the extreme violence of the explosion
as regarded myself, to its proper cause - my situation directly above it, and in the line of its greatest power. But at the time I thought only of preserving my life. The balloon at first collapsed, then furiously expanded, then whirled round and round with sickening velocity, and finally, reeling and staggering like a drunken man, hurled me over the rim of the car, and left me dangling, at a terrific height, with my head downward and my face outward, by a piece of slender cord about three feet in length, which hung accidentally through a crevice near the bottom of the wicker-work, and in which, as I fell, my left foot became most providentially entangled. It is impossible - utterly impossible - to form any adequate idea of the horror of my situation. I gasped convulsively for breath - a shudder resembling a fit of the ague agitated every nerve and muscle in my frame - I felt my eyes starting from their sockets - a horrible nausea overwhelmed me and at length I lost all consciousness in a swoon.

How long I remained in this state it is impossible to say. It must, however, have been no inconsiderable time, for, when I partially recovered the sense of existence, I found the day breaking, the balloon at a prodigious height over a wilderness of ocean, and not a trace of land to be discovered far and wide within the limits of the vast horizon. My sensations, however, upon thus recovering, were by no means so replete with agony as might have been anticipated. Indeed, there was much of madness in the calm survey which I began to take of my situation. I drew up to my eyes each of my hands, one after the other, and wondered what occurrence could have given rise to the swelling of the veins, and the horrible blackness of the finger-nails. I afterwards carefully examined

## ADVENTURE OF ONE HANS PFAALL

my head, shaking it repeatedly, and feeling it with minute attention, until I succeeded in satisfying myself that it was not, as I had more than half suspected, larger than my balloon. Then, in a knowing manner, I felt in both my breeches pockets, and, missing therefrom a set of tablets and a toothpick case, endeavored to account for their disappearance, and, not being able to do so, felt inexpressibly chagrined. It now occurred to me that I suffered great uneasiness in the joint of my left ankle, and a dim consciousness of my situation began to glimmer through my mind. But, strange to say! I was neither astonished nor horror-stricken. If I felt any emotion at all, it was a kind of chuckling satisfaction at the cleverness I was about to display in extricating myself from this dilemma; and never, for a moment, did I look upon my ultimate safety as a question susceptible of doubt. For a few minutes I remained wrapped in the profoundest meditation. I have a distinct recollection of frequently compressing my lips, putting my forefinger to the side of my nose, and making use of other gesticulations and grimaces common to men who, at ease in their armchairs, meditate upon matters of intricacy or importance. Having, as I thought, sufficiently collected my ideas, I now, with great caution and deliberation, put my hands behind my back, and unfastened the large iron buckle which belonged to the waistband of my pantaloons. This buckle had three teeth, which, being somewhat rusty, turned with great difficulty on their axis. I brought them, however, after some trouble, at right angles to the body of the buckle, and was glad to find them remain firm in that position. Holding within my teeth the instrument thus obtained, I now proceeded to untie the knot of my cravat. I had to
rest several times before I could accomplish this manœuvre; but it was at length accomplished. To one end of the cravat I then made fast the buckle, and the other end I tied, for greater security, tightly around my wrist. Drawing now my body upwards, with a prodigious exertion of muscular force, I succeeded, at the very first trial, in throwing the buckle over the car, and entangling it, as I had anticipated, in the circular rim of the wicker-work.

My body was now inclined towards the side of the car, at an angle of about forty-five degrees; but it must not be understood that I was therefore only forty-five degrees below the perpendicular. So far from it, I still lay nearly level with the plane of the horizon; for the change of situation which I had acquired, had forced the bottom of the car considerably outward from my position, which was accordingly one of the most imminent peril. It should be remembered, however, that when I fell, in the first instance, from the car, if I had fallen with my face turned toward the balloon, instead of turned outwardly from it as it actually was - or if, in the second place, the cord by which I was suspended had chanced to hang over the upper edge, instead of through a crevice near the bottom of the car - I say it may readily be conceived that, in either of these supposed cases, I should have been unable to accomplish even as much as I had now accomplished, and the disclosures now made would have been utterly lost to posterity. I had therefore every reason to be grateful; although, in point of fact, I was still too stupid to be anything at all, and hung for, perhaps, a quarter of an hour in that extraordinary manner, without making the slightest farther exertion, and in a singularly tranquil state
of idiotic enjoyment. But this feeling did not fail to die rapidly away, and thereunto succeeded horror, and dismay, and a sense of utter helplessness and ruin. In fact, the blood so long accumulating in the vessels of my head and throat, and which had hitherto buoyed up my spirits with delirium, had now begun to retire within their proper channels, and the distinctness which was thus added to my perception of the danger merely served to deprive me of the self-possession and courage to encounter it. But this weakness was, luckily for me, of no very long duration. In good time came to my rescue the spirit of despair, and, with frantic cries and struggles, I jerked my way bodily upwards, till, at length, clutching with a vicelike grip the long-desired rim, I writhed my person over it, and fell headlong and shuddering within the car.

It was not until some time afterward that I recovered myself sufficiently to attend to the ordinary cares of the balloon. I then, however, examined it with attention, and found it, to my great relief, uninjured. My implements were all safe, and, fortunately, I had lost neither ballast nor provisions. Indeed, I had so well secured them in their places, that such an accident was entirely out of the question. Looking at my watch, I found it six o'clock. I was still rapidly ascending, and the barometer gave a present altitude of three and three-quarter miles. Immediately beneath me in the ocean lay a small black object, slightly oblong in shape, seemingly about the size of a domino, and in every respect bearing a great resemblance to one of those toys. Bringing my telescope to bear upon it, I plainly discerned it to be a British ninety. four gun ship, close-hauled, and pitching heavily in
the sea with her head to the W. S. W. Besides this ship, I saw nothing but the ocean and the sky, and the sun, which had long arisen.

It is now high time that I should explain to your Excellencies the object of my voyage. Your Excellencies will bear in mind that distressed circumstances in Rotterdam had at length driven me to the resolution of committing suicide. It was not, however, that to life itself I had any positive disgust, but that I was harassed beyond endurance by the adventitious miseries attending my situation. In this state of mind, wishing to live, yet wearied with life, the treatise at the stall of the bookseller, backed by the opportune discovery of my cousin of Nantz, opened a resource to my imagination. I then finally made up my mind. I determined to depart, yet live - to leave the world, yet continue to exist - in short, to drop enigmas, I resolved, let what would ensue, to force a passage, if I could, to the moon. Now, lest I should be supposed more of a madman than I actually am, I will detail, as well as I am able, the considerations which led me to believe that an achievement of this nature, although without doubt difficult and full of danger, was not absolutely, to a bold spirit, beyond the confines of the possible.

The moon's actual distance from the earth was the first thing to be attended to. Now, the mean or average interval between the centres of the two planets is 59.9643 of the earth's equatorial radii, or only about 237,000 miles. I say the mean or average interval ; but it must be borne in mind that, the form of the moon's orbit being an ellipse of eccentricity amounting to no less than 0.05484 of the major semiaxis of the ellipse itself, and the earth's centre being
situated in its focus, if I could, in any manner, contrive to meet the moon in its perigee, the abovementioned distance would be materially diminished. But to say nothing, at present, of this possibility, it was very certain that, at all events, from the 237,000 miles I would have to deduct the radius of the earth, say 4,000 , and the radius of the moon, say 1,080 , in all 5,080 , leaving an actual interval to be traversed, under average circumstances, of 231,920 miles. Now this, I reflected, was no very extraordinary distance. Travelling on the land has been repeatedly accomplished at the rate of sixty miles per hour ; and indeed a much greater speed may be anticipated. But even at this velocity, it would take me no more than one hundred and sixty-one days to reach the surface of the moon. There were, however, many particulars inducing me to believe that my average rate of travelling might possibly very much exceed that of sixty miles per hour, and, as these considerations did not fail to make a deep impression upon my mind, I will mention them more fully hereafter.

The next point to be regarded was one of far greater importance. From indications afforded by the barometer, we find that, in ascensions from the surface of the earth, we have, at the height of r,000 feet, left below us about one-thirtieth of the entire mass of atmospheric air; that at 10,600 , we have ascended through nearly one-third; and that at 18,000 , which is not far from the elevation of Cotopaxi, we have surmounted one-half the material, or, at all events, one-half the ponderable body of air incumbent upon our globe. It is also calculated that at an altitude not exceeding the hundredth part of the earth's diameter - that is, not exceeding eighty miles

- the rarefaction would be so excessive that animal life could in no manner be sustained, and, moreover, that the most delicate means we possess of ascertaining the presence of the atmosphere would be inadequate to assure us of its existence. But I did not fail to perceive that these latter calculations are founded altogether on our experimental knowledge of the properties of air, and the mechanical laws regulating its dilation and compression, in what may be called, comparatively speaking, the immediate vicinity of the earth itself; and, at the same time, it is taken for granted that animal life is, and must be, essentially incapable of modification at any given unattainable distance from the surface. Now, all such reasoning, and from such data, must of course be simply analogical. The greatest height ever reached by man was that of 25,000 feet, attained in the aeronautic expedition of Messieurs Gay-Lussac and Biot. This is a moderate altitude, even when compared with the eighty miles in question; and I could not help thinking that the subject admitted room for doubt, and great latitude for speculation.

But, in point of fact, an ascension being made to any given altitude, the ponderable quantity of air surmounted in any farther ascension is by no means in proportion to the additional height ascended (as may be plainly seen from what has been stated before), but in a ratio constantly decreasing. It is therefore evident that, ascend as high as we may, we cannot, literally speaking, arrive at a limit beyond which no atmosphere is to be found. It must exist, I argued; although it may exist in a state of infinite rarefaction.

On the other hand, I was aware that arguments
have not been wanting to prove the existence of a real and definite limit to the atmosphere, beyond which there is absolutely no air whatsoever. But a circumstance, which has been left out of view by those who contend for such a limit, seemed to me, although no positive refutation of their creed, still a point worthy very serious investigation. On comparing the intervals between the successive arrivals of Encke's comet at its perihelion, after giving credit, in the most exact manner, for all the disturbances due to the attractions of the planets, it appears that the periods are gradually diminishing; that is to say, the major axis of the comet's ellipse is growing shorter, in a slow but perfectly regular decrease. Now, this is precisely what ought to be the case, if we suppose a resistance experienced from the comet from an extremely rare ethereal mediun pervading the regions of its orbit. For it is evident that such a medium must, in retarding the comet's velocity, increase its centripetal, by weakening its centrifugal, force. In other words, the sun's attraction would be constantly attaining greater power, and the comet would be drawn nearer at every revolution. Indeed, there is no other way of accounting for the variation in question. But again:- The real diameter of the same comet's nebulosity is observed to contract rapidly as it approaches the sun, and dilate with equal rapidity in its departure toward its aphelion. Was I not justifiable in supposing, with M. Valz, that this apparent condensation of volume has its origin in the compression of the same ethereal medium I have spoken of before, and which is dense in proportion to its vicinity to the sun? The len-ticular-shaped phenomenon, also, called the zodiacal
light, was a matter worthy of attention. This radiance, so apparent in the tropics, and which cannot be mistaken for any meteoric lustre, extends from the horizon obliquely upwards, and follows generally the direction of the sun's equator. It appeared to me evidently in the nature of a rare atmosphere extending from the sun outwards, beyond the orbit of Venus at least, and I believed indefinitely farther. ${ }^{1}$ Indeed, this medium I could not suppose confined to the path of the comet's ellipse, or to the immediate neighborhood of the sun. It was easy, on the contrary, to imagine it pervading the entire regions of our planetary system, condensed into what we call atmosphere at the planets themselves, and perhaps at some of them modified by considerations purely geological; that is to say, modified, or varied in its proportions (or absolute nature) by matters volatilized from the respective orbs.

Having adopted this view of the subject, I had little farther hesitation. Granting that on my passage I should meet with atmosphere essentially the same as at the surface of the earth, I conceived that, by means of the very ingenious apparatus of M. Grimm, I should readily be enabled to condense it in sufficient quantity for the purposes of respiration. This would remove the chief obstacle in a journey to the moon. I had indeed spent some money and great labor in adapting the apparatus to the object intended, and confidently looked forward to its successful application, if I could manage to complete the voyage within any reasonable period. - This

[^5]brings me back to the rate at which it would be possible to travel.

It is true that balloons, in the first stage of their ascensions from the earth, are known to rise with a velocity comparatively moderate. Now, the power of elevation lies altogether in the superior gravity of the atmospheric air compared with the gas in the balloon; and, at first sight, it does not appear probable that, as the balloon acquires altitude, and consequently arrives successively in atmospheric strata of densities rapidly diminishing - I say, it does not appear at all reasonable that, in this its progress upward, the original velocity should be accelerated. On the other hand, I was not aware that, in any recorded ascension, a diminution had been proved to be apparent in the absolute rate of ascent; although such should have been the case, if on account of nothing else, on account of the escape of gas through balloons ill constructed, and varnished with no better material than the ordinary varnish. It seemed, therefore, that the effect of such escape was only sufficient to counterbalance the effect of the acceleration attained in the diminishing of the balloon's distance from the gravitating centre. I now considered that, provided in my passage I found the medium I had imagined, and provided it should prove to be essentially what we denominate atmospheric air, it could make comparatively little difference at what extreme state of rarefaction I should discover it - that is to say, in regard to my power of ascending - for the gas in the balloon would not only be itself subject to similar rarefaction (in proportion to the occurrence of which, I could suffer an escape of so much as would be requisite to prevent explosion), but, being what it was,
would, at all events, continue specifically lighter than any compound whatever of mere nitrogen and oxygen. Thus there was a chance - in fact, there was a strong probability - that, at no epoch of my ascent, I should reach a point where the united weights of my immense balloon, the inconceivably rare gas within it, the car. and its contents, shouid cqual the weight of the mass of the surrounding atmosphere displaced; and this will be readily understood as the sole condition upon which my upward flight would be arrested. But, if this point were even attained, I could dispense with ballast and other weight to the amount of nearly 300 pounds. In the mean time, the force of gravitation would be constantly diminishing, in proportion to the squares of the distances, and so, with a velocity prodigiously accelerating, I should at length arrive in those distant regions where the force of the earth's attraction would be superseded by that of the moon.

There was another difficulty, however, which occasioned me some little disquietude. It has been observed that, in balloon ascensions to any considerable height, besides the pain attending respiration, great uneasiness is experienced about the head and body, often accompanied with bleeding at the nose and other symptoms of an alarming kind, and growing more and more inconvenient in proportion to the altitude attained. ${ }^{1}$ This was a reflection of a nature somewhat startling. Was it not probable that these symptoms would increase until terminated by death

[^6]itself? I finally thought not. Their origin was to be looked for in the progressive removal of the customary atmospheric pressure upon the surface of the body, and consequent distention of the superficial blood-vessels - not in any positive disorganization of the animal system, as in the case of difficulty in breathing, where the atmospheric density is chemically insufficient for the due renovation of blood in a ventricle of the heart. Unless for default of this renovation, I could see no reason, therefore, why life could not be sustained even in a vacuum ; for the expansion and compression of chest, commonly called breathing, is action purely muscular, and the cause, not the effect, of respiration. In a word, I conceived that, as the body should become habituated to the want of atmospheric pressure, these sensations of pain would gradually diminish - and to endure them while they continued, I relied with confidence upon the iron hardihood of my constitution.

Thus, may it please your Excellencies, I have detailed some, though by no means all, the considerations which led me to form the project of a lunar voyage. I shall now proceed to lay before you the result of an attempt so apparently audacious in conception, and, at all events, so utterly unparalleled in the annals of mankind.

Having attained the altitude before mentioned that is to say, three miles and three-quarters - I threw out from the car a quantity of feathers, and found that I still ascended with sufficient rapidity; there was, therefore, no necessity for discharging any ballast. I was glad of this, for I wished to retain with me as much weight as I could carry, for the obvious reason that I could not be positive either
about the gravitation or the atmospheric density of the moon. I as yet suffered no bodily inconvenience, breathing with great freedom, and feeling no pain whatever in the head. The cat was lying very demurely upon my coat, which I had taken off, and eying the pigeons with an air of nonchalance. These latter being tied by the leg, to prevent their escape, were busily employed in picking up some grains of rice scattered for them in the bottom of the car.

At twenty minutes past six o'clock, the barometer showed an elevation of 26,400 feet, or five miles to a fraction. The prospect seemed unbounded. Indeed, it is very easily calculated, by means of spherical geometry, how great an extent of the earth's area I beheld. The convex surface of any segment of a sphere is to the entire surface of the sphere itself as the versed sine of the segment to the diameter of the sphere. Now, in my case, the versed sine - that is to say, the thickness of the segment beneath me was about equal to my elevation, or the elevation of the point of sight above the surface, "As five miles. then, to eight thousand," would express the proportion of the earth's area seen by me. In other words, I beheld as much as a sixteen-hundredth part of the whole surface of the globe. The sea appeared unruffled as a mirror, although, by means of the telescope, I could perceive it to be in a state of violent agitation. The ship was no longer visible, having drifted away, apparently, to the eastward. I now began to experience, at intervals, severe pain in the head, especially about the ears - still, however, breathing with tolerable freedom. The cat and pigeons seemed to suffer no inconvenience whatsoever.

At twenty minutes before seven, the balloon entered
a long series of dense cloud, which put me to great trouble by damaging my condensing apparatus and wetting me to the skin. This was, to be sure, a singular rencontre, for I had not believed it possible that a cloud of this nature could be sustained at so great an elevation. I thought it best, however, to throw out two five-pound pieces of ballast, reserving still a weight of one hundred and sixty-five pounds. Upon so doing, I soon rose above the diffculty, and perceived immediately that I had obtained a great increase in my rate of ascent. In a few seconds after my leaving the cloud, a flash of vivid lightning shot from one end of it to the other, and caused it to kindle up, throughout its vast extent, like a mass of ignited charcoal. This, it must be remem. bered, was in the broad light of day. No fancy may picture the sublimity which might have been exhibited by a similar phenomenon taking place amid the darkness of the night. Hell itself might then have found a fitting image. Even as it was, my hair stood on end, while I gazed afar down within the yawning abysses, letting imagination descend, and stalk about in the strange vaulted halls, and ruddy gulfs, and red ghastly chasms of the hideous and unfathomable fire. I had indeed made a narrow escape. Had the balloon remained a very short while longer within the cloud - that is to say, had not the inconvenience of getting wet determined me to discharge the ballast - my destruction might, and probably would, have been the consequence. Such perils, although little considered, are perhaps the greatest which must be encountered in balloons. I had by this time, however, attained too great an elevation to be any longer uneasy on this head.

[^7]I was now rising rapidly, and by seven o'clock the barometer indicated an altitude of no less than nine miles and a half. I began to find great difficulty in drawing my breath. My head, too, was excessively painful; and, having felt for some time a moisture about my cheeks, I at length discovered it to be blood, which was oozing quite fast from the drums of my ears. My eyes, also, gave me great uneasiness. Upon passing the hand over them they seemed to have protruded from their sockets in no inconsiderable degree; and all objects in the car, and even the balloon itself, appeared distorted to my vision. These symptoms were more than I had expected, and occasioned me some alarm. At this juncture, very imprudently, and without consideration, I threw out from the car three five-pound pieces of ballast. The accelerated rate of ascent thus obtained, carried me too rapidly, and without sufficient gradation, into a highly rarefied stratum of the atmosphere, and the result had nearly proved fatal to my expedition and to myself. I was suddenly seized with a spasm which lasted for more than five minutes, and even when this in a measure ceased, I could catch my breath only at long intervals, and in a gasping manner, - bleeding all the while copiously at the nose and ears, and even slightly at the eyes. The pigeons appeared distressed in the extreme, and struggled to escape; while the cat mewed piteously, and with her tongue hanging out of her mouth, staggered to and fro in the car as if under the influence of poison. I now too late discovered the great rashness of which I had been guilty in discharging the ballast, and my agitation was excessive. I anticipated nothing less than death, and death in a few minutes. The physical suffering I underwent
contributed also to render me nearly incapable of making any exertion for the preservation of my life. I had, indeed, little power of reflection left, and the violence of the pain in my head seemed to be greatly on the increase. Thus I found that my senses would shortly give way altogether, and I had already clutched one of the valve ropes with the view of attempting a descent, when the recollection of the trick I had played the three creditors, and the possible consequences to myself, should I return, operated to deter me for the moment. I lay down in the bottom of the car, and endeavored to collect my faculties. In this I so far succeeded as to deternine upon the experiment of losing blood. Having no lancet, however, I was constrained to perform the operation in the best manner I was able, and finally succeeded in opening a vein in my left arm with the blade of my penknife. The blood had hardly commenced flowing when I experienced a sensible relief, and by the time I had lost about half a moderate basin-full, most of the worst symptoms had abandoned me entirely. I nevertheless did not think it expedient to attempt getting on my feet immediately; but, having tied up my arm as well as I could, I lay still for about a quarter of an hour. At the end of this time I arose, and found myself freer from absolute pain of any kind than I had been during the last hour and a quarter of my ascension. The difficulty of breathing, however, was diminished in a very slight degree, and I found that it would soon be positively necessary to make use of my condenser. In the mean time, looking towards the cat, who was again snugly stowed away upon my coat, I discovered, to my infinite surprise, that she had taken the opportunity of my
indisposition to bring into light a litter of three little kittens. This was an addition to the number of passengers on my part altogether unexpected; but I was pleased at the occurrence. It would afford me a chance of bringing to a kind of test the truth of a surmise, which, more than anything else, had influenced me in attempting this ascension. I had imagined that the habitual endurance of the atmospheric pressure at the surface of the earth was the cause, or nearly so, of the pain attending animal existence at a distance above the surface. Should the kittens be found to suffer uneasiness in an equal degree with their mother, I must consider my theory in fault, but a failure to do so I should look upon as a strong confirmation of my idea.

By eight o'clock I had actually attained an elevation of seventeen miles above the surface of the earth. Thus it seemed to me evident that my rate of ascent was not only on the increase, but that the progression would have been apparent in a slight degree even had I not discharged the ballast which I did. The pains in my head and ears returned, at intervals, with violence, and I still continued to bleed occasionally at the nose; but, upon the whole, I suffered much less than might have been expected. I breathed, however, at every moment, with more and more difficulty, and each inhalation was attended with a troublesome spasmodic action of the chest. I now unpacked the condensing apparatus, and got it ready for immediate use.

The view of the earth, at this period of my ascension, was beautiful indeed. To the westward, the northward, and the southward, as far as I could see, lay a boundless sheet of apparently unruffled ocean, which
every moment gained a deeper and deeper tint of blue. At a vast distance to the eastward, although perfectly discernible, extended the islands of Great Britain, the entire Atlantic coasts of France and Spain, with a small portion of the northern part of the continent of Africa. Of individual edifices not a trace could be discovered, and the proudest cities of mankind had utterly faded away from the face of the earth.

What mainly astonished me, in the appearance of things below, was the seeming concavity of the surface of the globe. I had, thoughtlessly enough, expected to see its real convexity become evident as I ascended ; but a very little reflection sufficed to explain the discrepancy. A line, dropped from my position perpendicularly to the earth, would have formed the perpendicular of a right-angled triangle, of which the base would have extended from the right angle to the horizon, and the hypothenuse from the horizon to my position. But my height was little or nothing in comparison with my prospect. In other words, the base and hypothenuse of the supposed triangle would, in my case, have been so long, when compared to the perpendicular, that the two former might have been regarded as nearly parallel. In this manner, the horizon of the aeronaut appears always to be upon a level with the car. But as the point immediately beneath him seems, and is, at a great distance below him, it seems, of course, also at a great distance below the horizon. Hence the impression of concavity; and this impression must remain, until the elevation shall bear so great a proportion to the prospect that the apparent parallelism of the base and hypothenuse disappears.

The pigeons about this time seeming to undergo
much suffering, I determined upon giving them their liberty. I first untied one of them, a beautiful graymottled pigeon, and placed him upon the rim of the wicker-work. He appeared extremely uneasy, looking anxiously around him, fluttering his wings, and making a loud cooing noise, but could not be persuaded to trust himself from the car. I took him up at last, and threw him to about half-a-dozen yards from the balloon. He made, however, no attempt to descend, as I had expected, but struggled with great vehemence to get back, uttering at the same time very shrill and piercing cries. He at length succeeded in regaining his former station on the rim, but had hardly done so when his head dropped upon his breast, and he fell dead within the car. The other one did not prove so unfortunate. To prevent his following the example of his companion, and accomplishing a return, I threw him downwards with all my force, and was pleased to find him continue his descent, with great velocity, making use of his wings with ease, and in a perfectly natural manner. In a very short time he was out of sight, and I have no doubt he reached home in safety. Puss, who seemed in a great measure recovered from her illness, now made a hearty meal of the dead bird, and then went to sleep with much apparent satisfaction. Her kittens were quite lively, and so far evinced not the slightest sign of any uneasiness.

At a quarter-past eight, being able no longer to draw breath without the most intolerable pain, I proceeded, forthwith, to adjust around the car the apparatus belonging to the condenser. This apparatus will require some little explanation, and your Excellencies will please to bear in mind that my object, in the first place, was to surround myself and
car entirely with a barricade against the highly rarefied atmosphere in which I was existing, with the intention of introducing within this barricade, by means of my condenser, a quantity of this same atmosphere sufficiently condensed for the purposes of respiration. With this object in view I had prepared a very strong, perfectly air-tight, but flexible gumelastic bag. In this bag, which was of sufficient dimensions, the entire car was in a manner placed. That is to say, it (the bag) was drawn over the whole bottom of the car, up its sides, and so on, along the outside of the ropes, to the upper rim or hoop where the network is attached. Having pulled the bag up in this way, and formed a complete enclosure on all sides and at bottom, it was now necessary to fasten up its top or mouth, by passing its material over the hoop of the network, - in other words, between the network and the hoop. But if the network were separated from the hoop to admit this passage, what was to sustain the car in the mean time? Now the network was not permanently fastened to the hoop, but attached by a series of running loops or nooses. I therefore undid only a few of these loops at one time, leaving the car suspended by the remainder. Having thus inserted a portion of the cloth forming the upper part of the bag, I refastened the loops, - not to the hoop, for that would have been impossible, since the cloth now intervened, - but to a series of large buttons, affixed to the cloth itself, about three feet below the mouth of the bag; the intervals between the buttons having been made to correspond to the intervals between the loops. This done, a few more of the loops were unfastened from the rim, a farther portion of the cloth introduced, and the dis-
engaged loops then connected with their proper buttons. In this way it was possible to insert the whole upper part of the bag between the network and the hoop. It is evident that the hoop would now drop down within the car, while the whole weight of the car itself, with all its contents, would be held up merely by the strength of the buttons. This, at first sight, would seem an inadequate dependence; but it was by no means so, for the buttons were not only very strong in themselves, but so close together that a very slight portion of the whole weight was supported by any one of them. Indeed, had the car and contents been three times heavier than they were, I should not have been at all uneasy. I now raised up the hoop again within the covering of gum-elastic, and propped it at nearly its former height by means of three light poles prepared for the occasion. This was done, of course, to keep the bag distended at the top, and to preserve the lower part of the network in its proper situation. All that now remained was to fasten up the mouth of the enclosure; and this was readily accomplished by gathering the folds of the material together, and twisting them up very tightly on the inside by means of a kind of stationary tourniquet.

In the sides of the covering thus adjusted round the car had been inserted three circular panes of thick but clear glass, through which I could see without difficulty around me in every horizontal direction. In that portion of the cloth forming the bottom was likewise a fourth window, of the same kind, and corresponding with a small aperture in the floor of the car itself. This enabled me to see perpendicularly down, but having found it impossible to place any
similar contrivance overhead, on account of the peculiar manner of closing up the opening there, and the consequent wrinkles in the cloth, I could expect to see no objects situated directly in my zenith. This, of course, was a matter of little consequence; for, had I even been able to place a window at top, the balloon itself would have prevented my making any use of it.

About a foot below one of the side windows was a circular opening, three inches in diameter, and fitted with a brass rim adapted in its inner edge to the windings of a screw. In this rim was screwed the large tube of the condenser, the body of the machine being, of course, within the chamber of gum-elastic. Through this tube a quantity of the rare atmosphere circumjacent being drawn by means of a vacuum created in the body of the machine, was thence discharged, in a state of condensation, to mingle with the thin air already in the chamber. This operation, being repeated several times, at length filled the chamber with atmosphere proper for all the purposes of respiration. But in so confined a space it would, in a short time, necessarily become foul, and unfit for use from frequent contact with the lungs. It was then ejected by a small valve at the bottom of the car, - the dense air readily sinking into the thinner atmosphere below. To avoid the inconvenience of making a total vacuum at any moment within the chamber, this purification was never accomplished all at once, but in a gradual manner, - the valve being opened only for a few seconds, then closed again, until one or two strokes from the pump of the condenser had supplied the place of the atmosphere ejected. For the sake of experiment I had put the cat and kittens in a small basket, and suspended it 169
outside the car to a button at the bottom, close by the valve, through which I could feed them at any moment when necessary. I did this at some little risk, and before closing the mouth of the chamber, by reaching under the car with one of the poles before mentioned, to which a hook had been attached. As soon as dense air was admitted in the chamber, the hoop and poles became unnecessary; the expansion of the enclosed atmosphere powerfully distending the gum-elastic.

By the time I had fully completed these arrangements and filled the chamber as explained, it wanted only ten minutes of nine o'clock. During the whole period of my being thus employed, I endured the most terrible distress from difficulty of respiration, and bitterly did I repent the negligence, or rather foolhardiness, of which I had been guilty, of putting off to the last moment a matter of so much importance. But having at length accomplished it, I soon began to reap the benefit of my invention. Once again I breathed with perfect freedom and ease - and indeed why should I not? I was also agreeably surprised to find myself, in a great measure, relieved from the violent pains which had hitherto tormented me. A slight headache, accompanied with a sensation of fulness or distention about the wrists, the ankles, and the throat, was nearly all of which I had now to complain. Thus it seemed evident that a greater part of the uneasiness attending the removal of atmospheric pressure had actually worn off, as I had expected, and that much of the pain endured for the last twe hours should have been attributed altogether to the effects of a deficient respiration.

At twenty minutes before nine o'clock, - that is to
say, a short time prior to my closing up the mouth of the chamber, - the mercury attained its limit, or ran down, in the barometer, which, as I mentioned before, was one of an extended construction. It then indicated an altitude on my part of 132,000 feet, or five and twenty miles, and I consequently surveyed at that time an extent of the earth's area amounting to no less than the three hundred-and-twentieth part of its entire superficies. At nine o'clock I had again lost sight of land to the eastward, but not before I became aware that the balloon was drifting rapidly to the N. N. W. The ocean beneath me still retained its apparent concavity, although my view was often interrupted by the masses of cloud which floated to and fro.

At half-past nine I tried the experiment of throwing out a handful of feathers through the valve. They did not float as I had expected, but dropped down perpendicularly, like a bullet, en masse, and with the greatest velocity, - being out of sight in a very few seconds. I did not at first know what to make of this extraordinary phenomenon; not being able to believe that my rate of ascent had, of a sudden, met with so prodigious an acceleration. But it soon occurred to me that the atmosphere was now far too rare to sustain even the feathers; that they actually fell, as they appeared to do, with great rapidity; and that I had been surprised by the united velocities of their descent and my own elevation.

By ten o'clock I found that I had very little to occupy my immediate attention. Affairs went on swimmingly, and I believed the balloon to be going upwards with a speed increasing momently, although I had no longer any means of ascertaining the progression of the increase. I suffered no pain or uneasi-
ness of any kind, and enjoyed better spirits than I had at any period since my departure from Rotterdam; busying myself now in examining the state of my various apparatus, and now in regenerating the atmosphere within the chamber. This latter point I determined to attend to at regular intervals of forty minutes, more on account of the preservation of my health, than from so frequent a renovation being absolutely necessary. In the mean while I could not help making anticipations. Fancy revelled in the wild and dreamy regions of the moon. Imagination, feeling herself for once unshackled, roamed at will among the ever-changing wonders of a shadowy and unstable land. Now there were hoary and time-honored forests, and craggy precipices, and waterfalls tumbling with a loud noise into abysses without a bottom. Then I came suddenly into still noonday solitudes, where no wind of heaven ever intruded, and where vast meadows of poppies and slender, lily-looking flowers spread themselves out a weary distance, all silent and motionless forever. Then again I journeyed far down away into another country where it was all one dim and vague lake, with a boundary-line of clouds. But fancies such as these were not the sole possessors of my brain. Horrors of a nature most stern and most appalling would too frequently obtrude themselves upon my mind, and shake the innermost depths of my soul with the bare supposition of their possibility. Yet I would not suffer my thoughts for any length of time to dwell upon these latter speculations, rightly judging the real and palpable dangers of the voyage sufficient for my undivided attention.

At five o'clock p. m., being engaged in regenerating the atmosphere within the chamber, I took that oppor-
tunity of observing the cat and kittens through the valve. The cat herself appeared to suffer again very much, and I had no hesitation in attributing her uneasiness chiefly to a difficulty in breathing; but my experiment with the kittens had resulted very strangely. I had expected, of course, to see them betray a sense of pain, although in a less degree than their mother; and this would have been sufficient to confirm my opinion concerning the habitual endurance of atmospheric pressure. But I was not prepared to find them, upon close examination, evidently enjoying a high degree of health, breathing with the greatest ease and perfect regularity, and evincing not the slightest sign of any uneasiness. I could only account for all this by extending my theory, and supposing that the highly rarefied atmosphere around might perhaps not be, as I had taken for granted, chemically insufficient for the purposes of life, and that a person born in such a medium might, possibly, be unaware of any inconvenience attending its inhalation, while, upon removal to the denser strata near the earth, he might endure tortures of a similar nature to those I had so lately experienced. It has since been to me a matter of deep regret that an awkward accident, at this time, occasioned me the loss of my little family of cats, and deprived me of the insight into this matter which a continued experiment might have afforded. In passing my hand through the valve, with a cup of water for the old puss, the sleeve of my shirt became entangled in the loop which sustained the basket, and thus, in a moment, loosened it from the button. Had the whole actually vanished into air, it could not have shot from my sight in a more abrupt and instantaneous manner. Positively, there
could not have intervened the tenth part of a second between the disengagement of the basket and its absolute disappearance with all that it contained. My good wishes followed it to the earth, but of course I had no hope that either cat or kittens would ever live to tell the tale of their misfortune.

At six o'clock I perceived a great portion of the earth's visible area to the eastward involved in thick shadow, which continued to advance with great rapidity, until, at five minutes before seven, the whole surface in view was enveloped in the darkness of night. It was not, however, until long after this time that the rays of the setting sun ceased to illumine the balloon; and this circumstance, although of course fully anticipated, did not fail to give me an infinite deal of pleasure. It was evident that, in the morning, I should behold the rising luminary many hours at least before the citizens of Rotterdam, in spite of their situation so much farther to the eastward, and thus, day after day, in proportion to the height ascended, would I enjoy the light of the sun for a longer and a longer period. I now determined to keep a journal of my passage, reckoning the days from one to twenty-four hours continuously, without taking into consideration the intervals of darkness.

At ten o'clock, feeling sleepy, I determined to lie down for the rest of the night; but here a difficulty presented itself, which, obvious as it may appear, had escaped my attention up to the very moment of which I am now speaking. If I went to sleep as I proposed, how could the atmosphere in the chamber be regenerated in the interim? To breathe it for more than an hour, at the farthest, would be a matter of impossibility; or, if even this term could be extended
to an hour and a quarter, the most ruinous consequences might ensue. The consideration of this dilemma gave me no little disquietude; and it will hardly be believed that, after the dangers I had undergone, I should look upon this business in so serious a light as to give up all hope of accomplishing my ultimate design, and finally make up my mind to the necessity of a descent. But this hesitation was only momentary. I reflected that man is the veriest slave of custom, and that many points in the routine of his existence are deemed essentially important, which are only so at all by his having rendered them habitual. It was very certain that I could not do without sleep; but I might easily bring myself to feel no inconvenience from being awakened at intervals of an hour during the whole period of my repose. It would require but five minutes, at most, to regenerate the atmosphere in the fullest manner and the only real difficulty was to contrive a method of arousing myself at the proper moment for so doing. But this was a question which, I am willing to confess, occasioned me no little trouble in its solution. To be sure, I had heard of the student who, to prevent his falling asleep over his books, held in one hand a ball of copper, the din of whose descent into a basin of the same metal on the floor beside his chair served effectually to startle him up, if, at any moment, he should be overcome with drowsiness. My own case, however, was very different indeed, and left me no room for any similar idea; for I did not wish to keep awake, but to be aroused from slumber at regular intervals of time. I at length hit upon the following expedient, which, simple as it may seem, was hailed by me, at the moment of discovery, as an invention
fully equal to that of the telescope, the steam-engine, or the art of printing itself.

It is necessary to premise that the balloon, at the elevation now attained, continued its course upwards with an even and undeviating ascent, and the car consequently followed with a steadiness so perfect that it would have been impossible to detect in it the slightest vacillation. This circumstance favored me greatly in the project I now determined to adopt. My supply of water had been put on board in kegs containing five gallons each, and ranged very securely around the interior of the car. I unfastened one of these, and, taking two ropes, tied them tightly across the rim of the wicker-work from one side to the other; placing them about a foot apart and parallel, so as to form a kind of shelf, upon which I placed the keg, and steadied it in a horizontal position. About eight inches immediately below these ropes, and four feet from the bottom of the car, I fastened another shelf - but made of thin plank, being the only similar piece of wood I had. Upon this latter shelf, and exactly beneath one of the rims of the keg, a small earthen pitcher was deposited. I now bored a hole in the end of the keg over the pitcher, and fitted in a plug of soft wood, cut in a tapering or conical shape. This plug I pushed in or pulled out, as might happen, until, after a few experiments, it arrived at that exact degree of tightness at which the water, oozing from the hole and falling into the pitcher below, would fill the lattar to the brim in the period of sixty minutes. This, of course, was a matter briefly and easily ascertained, by noticing the proportion of the pitcher filled in any given time. Having arranged all this, the rest of the plan is

## ADVENTURE OF ONE HANS PFAALL

obvious. My bed was so contrived upon the floor of the car as to bring my head, in lying down, immediately below the mouth of the pitcher. It was evident that, at the expiration of an hour, the pitcher, getting full, would be forced to run over, and to run over at the mouth, which was somewhat lower than the rim. It was also evident that the water, thus falling from a height of more than four feet, could not do otherwise than fall upon my face, and that the sure consequence would be to waken me up instantaneously, even from the soundest slumber in the world.

It was fully eleven by the time I had completed these arrangements, and I immediately betook myself to bed, with full confidence in the efficiency of $m y$ invention. Nor in this matter was I disappointed. Punctually every sixty minutes was I aroused by my trusty chronometer, when, having emptied the pitcher into the bung-hole of the keg, and performed the duties of the condenser, I retired again to bed. These regular interruptions to my slumber caused me even less discomfort than I had anticipated; and when I finally arose for the day, it was seven o'clock, and the sun had attained many degrees above the line of my horizon.

April 3d. I found the balloon at an immense height indeed, and the earth's convexity had now become strikingly manifest. Below me in the ocean lay a cluster of black specks, which undoubtedly were islands. Overhead, the sky was of a jetty black, and the stars were brilliantly visible; indeed they had been so constantly since the first day of ascent. Far away to the northward I perceived a thin, white, and exceedingly brilliant line, or streak, on the edge of the horizon, and I had no hesitation in supposing it vol. II. - 12 177
to be the southern disk of the ices of the Polar sea. My curiosity was greatly excited, for I had hopes of passing on much farther to the north, and might possibly, at some period, find myself placed directly above the Pole itself. I now lamented that my great elevation would, in this case, prevent my taking as accurate a survey as I could wish. Much, however, might be ascertained.

Nothing else of an extraordinary nature occurred during the day. My apparatus all continued in good order, and the balloon still ascended without any perceptible vacillation. The cold was intense, and obliged me to wrap up closely in an overcoat. When darkness came over the earth, I betook myself to bed, although it was for many hours afterwards broad daylight all around my immediate situation. The waterclock was punctual in its duty, and I slept until next morning soundly, with the exception of the periodical interruption.

April 4th. Arose in good health and spirits, and was astonished at the singular change which had taken place in the appearance of the sea. It had lost, in a great measure, the deep tint of blue it had hitherto worn, being now of a grayish-white, and of a lustre dazzling to the eye. The convexity of the ocean had become so evident that the entire mass of the distant water seemed to be tumbling headlong over the abyss of the horizon, and I found myself listening on tiptoe for the echoes of the mighty cataract. The islands were no longer visible; whether they had passed down the horizon to the southeast, or whether my increasing elevation had left them out of sight, it is impossible to say. I was inclined, however, to the latter opinion. The rim of ice to the northward was growing more
and more apparent. Cold by no means so intense. Nothing of importance occurred, and I passed the day in reading, having taken care to supply myself with books.

April 5th. Beheld the singular phenomenon of the sun rising while nearly the whole visible surface of the earth continued to be involved in darkness. In time, however, the light spread itself over all, and I again saw the line of ice to the northward. It was now very distinct, and appeared of a much darker hue than the waters of the ocean. I was evidently approaching it, and with great rapidity. Fancied I could again distinguish a strip of land to the eastward, and one also to the westward, but could not be certain. Weather moderate. Nothing of any consequence happened during the day. Went early to bed.

April 6th. Was surprised at finding the rim of ice at a very moderate distance, and an immense field of the same material stretching away off to the horizon in the north. It was evident that if the balloon held its present course it would soon arrive above the Frozen Ocean, and I had now little doubt of ultimately seeing the Pole. During the whole of the day I continued to near the ice. Towards night the limits of my horizon very suddenly and materially increased, owing undoubtedly to the earth's form being that of an oblate spheroid, and my arriving above the flattened regions in the vicinity of the Arctic circle. When darkness at length overtook me, I went to bed in great anxiety, fearing to pass over the object of so much curiosity when I should have no opportunity of observing it.

April 7th. Arose early, and, to my great joy, at
length beheld what there could be no hesitation in supposing the northern Pole itself. It was there, beyond a doubt, and immediately beneath my feet; but, alas! I had now ascended to so vast a distance that nothing could with accuracy be discerned. Indeed, to judge from the progression of the numbers indicating my various altitudes, respectively, at different periods, between six, A. m., on the second of April, and twenty minutes before nine, A. M., of the same day (at which time the barometer ran down) it might be fairly inferred that the balloon had now, at four o'clock in the morning of April the seventh, reached a height of not less, certainly, than 7,254 miles above the surface of the sea. This elevation may appear immense, but the estimate upon which it is calculated gave a result in all probability far inferior to the truth. At all events I undoubtedly beheld the whole of the earth's major diameter; the entire northern hemisphere lay beneath me like a chart orthographically projected; and the great circle of the equator itself formed the boundary line of my horizon. Your Excellencies may, however, readily imagine that the confined regions hitherto unexplored within the limits of the Arctic circle, although situated directly beneath me, and therefore seen without any appearance of being foreshortened, were still, in themselves, comparatively too diminutive, and at too great a distance from the point of sight, to admit of any very accurate examination. Nevertheless, what could be seen was of a nature singular and exciting. Northwardly from that huge rim before mentioned, and which, with slight qualification, may be called the limit of human discovery in these regions, one unbroken, or nearly unbroken, sheet of ice continues to extend. In the
first few degrees of this its progress, its surface is very sensibly flattened, farther on depressed into a plane, and finally, becoming not a little concave, it terminates, at the Pole itself, in a circular centre, sharply defined, whose apparent diameter subtended at the balloon an angle of about sixty-five seconds, and whose dusky hue, varying in intensity, was at all times darker than any other spot upon the visible hemisphere, and occasionally deepened into the most absolute blackness. Farther than this, little could be ascertained. By twelve o'clock the circular centre had materially decreased in circumference, and by seven, P. m., I lost sight of it entirely; the balloon passing over the western limb of the ice, and floating away rapidly in the direction of the equator.

April 8th. Found a sensible diminution in the earth's apparent diameter, besides a material alteration in its general color and appearance. The whole visible area partook in different degrees of a tint of pale yellow, and in some portions had acquired a brilliancy even painful to the eye. My view downwards was also considerably impeded by the dense atmosphere in the vicinity of the surface being loaded with clouds, between whose masses I could only now and then obtain a glimpse of the earth itself. This difficulty of direct vision had troubled me more or less for the last forty-eight hours; but my present enormous elevation brought closer together, as it were, the floating bodies of vapor, and the inconvenience became, of course, more and more palpable in proportion to my ascent. Nevertheless, I could easily perceive that the balloon now hovered above the range of great lakes in the continent of North America, and was holding a course, due south, which
would soon bring me to the tropics. This circumstance did not fail to give me the most heartfelt satisfaction, and I hailed it as a happy omen of ultimate success. Indeed, the direction I had hitherto taken had filled me with uneasiness; for it was evident that, had I continued it much longer, there would have been no possibility of my arriving at the moon at all, whose orbit is inclined to the ecliptic at only the small angle of $5^{\circ} 8^{\prime} 48^{\prime \prime}$. Strange as it may seem, it was only at this late period that I began to understand the great error I had committed, in not taking my departure from earth at some point in the plane of the lunar ellipse.

April 9 th. To-day, the earth's diameter was greatly diminished, and the color of the surface assumed hourly a deeper tint of yellow. The balloon kept steadily on her course to the southward, and arrived, at nine, P. M., over the northern edge of the Mexican Gulf.

April 10th. I was suddenly aroused from slumber, about five o'clock this morning, by a loud, crackling, and terrific sound, for which I could in no manner account. It was of very brief duration, but, while it lasted, resembled nothing in the world of which I had any previous experience. It is needless to say that I became excessively alarmed, having in the first instance attributed the noise to the bursting of the balloon. I examined all my apparatus, however, with great attention, and could discover nothing out of order. Spent a great part of the day in meditating upon an occurrence so extraordinary, but could find no means whatever of accounting for it. Went to bed dissatisfied, and in a state of great anxiety and agitation.

April inth. Found a startling diminution in the apparent diameter of the earth, and a considerable increase, now observable for the first time, in that of the moon itself, which wanted only a few days of being full. It now required long and excessive labor to condense within the chamber sufficient atmospheric air for the sustenance of life.

April i2th. A singular alteration took place in regard to the direction of the balloon, and, although fully anticipated, afforded me the most unequivocal delight. Having reached, in its former course, about the twentieth parallel of southern latitude, it turned off suddenly, at an acute angle, to the eastward, and thus proceeded throughout the day, keeping nearly, if not altogether, in the exact plane of the lunar ellipse. What was worthy of remark, a very perceptible vacillation in the car was a consequence of this change of route, - a vacillation which prevailed, in a more or less degree, for a period of many hours.

April 13th. Was again very much alarmed by a repetition of the loud crackling noise which terrified me on the tenth. Thought long upon the subject, but was unable to form any satisfactory conclusion. Great decrease in the earth's apparent diameter, which now subtended from the balloon an angle of very little more than twenty-five degrees. The moon could not be seen at all, being nearly in my zenith. I still continued in the plane of the ellipse, but made little progress to the eastward.

April 14th. Extremely rapid decrease in the diameter of the earth. To-day I became strongly impressed with the idea that the balloon was now actually running up the line of apsides to the point of perigee, - in other words, holding the direct course
which would bring it immediately to the moon in that part of its orbit the nearest to the earth. The moon itself was directly overhead, and consequently hidden from my view. Great and long-continued labor necessary for the condensation of the atmosphere.

April i5th. Not even the outlines of continents and seas could now be traced upon the earth with distinctness. About twelve o'clock I became aware, for the third time, of that appalling sound which had so astonished me before. It now, however, continued for some moments, and gathered intensity as it continued. At length, while, stupefied and terror-stricken, I stood in expectation of I knew not what hideous destruction, the car vibrated with excessive violence, and a gigantic and flaming mass of some material which I could not distinguish came with a voice of a thousand thunders, roaring and booming by the balloon. When my fears and astonishment had in some degree subsided, I had little difficulty in supposing it to be some mighty volcanic fragment ejected from that world to which I was so rapidly approaching, and, in all probability, one of that singular class of substances occasionally picked up on the earth, and termed meteoric stones for want of a better appellation.

April 16 th. To-day, looking upwards as well as I could, through each of the side windows alternately, I beheld, to my great delight, a very small portion of the moon's disk protruding, as it were, on all sides beyond the huge circumference of the balloon. My agitation was extreme; for I had now little doubt of soon reaching the end of my perilous voyage. Indeed, the labor now required by the condenser had increased to a most oppressive degree, and allowed me scarcely any respite from exertion. Sleep was a matter nearly IS4
out of the question. I became quite ill, and my frame trembled with exhaustion. It was impossible that human nature could endure this state of intense suffering much longer. During the now brief interval of darkness a meteoric stone again passed in my vicinity, and the frequency of these phenomena began to occasion me much apprehension.

April 17th. This morning proved an epoch in my voyage. It will be remembered that, on the thirteenth, the earth subtended an angular breadth of twentyfive degrees. On the fourteenth, this had greatly diminished; on the fifteenth, a still more rapid decrease was observable; and, on retiring for the night of the sixteenth, I had noticed an angle of no more than about seven degrees and fifteen minutes. What, therefore, must have been my amazement, on awakening from a brief and disturbed slumber, on the morning of this day, the seventeenth, at finding the surface beneath me so suddenly and wonderfully augmented in volume, as to subtend no less than thirty-nine degrees in apparent angular diameter! l was thunderstruck! No words can give any adequate idea of the extreme, the absolute horror and astonishment, with which I was seized, possessed, and altogether overwhelmed. My knees tottered beneath me - my teeth chattered - my hair started up on end. "The balloon, then, had actually burst!" These were the first tumultuous ideas which hurried through my mind: "The balloon had positively burst!-I was falling - falling with the most impetuous, the most unparalleled velocity! To judge from the immense distance already so quickly passed over, it could not be more than ten minutes, at the farthest, before I should meet the surface of the earth, and
be hurled into annihilation!" But at length reflection came to my relief. I paused; I considered; and I began to doubt. The matter was impossible. I could not in any reason have so rapidly come down. Besides, although I was evidently approaching the surface below me, it was with a speed by no means commensurate with the velocity I had at first conceived. This consideration served to calm the perturbation of my mind, and I finally succeeded in regarding the phenomenon in its proper point of view. In fact, amazement must have fairly deprived me of my senses, when I could not see the vast difference, in appearance, between the surface below me, and the surface of my mother earth. The latter was indeed over my head, and completely hidden by the balloon, while the moon - the moon itself in all its glory lay beneath me, and at my feet.

The stupor and surprise produced in my mind by this extraordinary change in the posture of affairs, was perhaps, after all, that part of the adventure least susceptible of explanation. For the bouleversement in itself was not only natural and inevitable, but had been long actually anticipated, as a circumstance to be expected whenever I should arrive at that exact point of my voyage where the attraction of the planet should be superseded by the attraction of the satellite - or, more precisely, where the gravitation of the balloon towards the earth should be less powerful than its gravitation towards the moon. To be sure, I arose from a sound slumber, with all my senses in confusion, to the contemplation of a very startling phenomenon, and one which, although expected, was not expected at the moment. The revolution itself must, of course, have taken place in an easy and
gradual manner, and it is by no means clear that, had I even been awake at the time of the occurrence, I should have been made aware of it by any internal evidence of an inversion - that is to say, by any inconvenience or disarrangement, either about my person or about my apparatus.

It is almost needless to say, that, upon coming to a due sense of my situation, and emerging from the terror which had absorbed every faculty of my soul, my attention was, in the first place, wholly directed to the contemplation of the general physical appearance of the moon. It lay beneath me like a chart and although I judged it to be still at no inconsiderable distance, the indentures of its surface were defined to my vision with a most striking and altogether unaccountable distinctness. The entire absence of ocean or sea, and indeed of any lake or river, or body of water whatsoever, struck me, at the first glance, as the most extraordinary feature in its geological condition. Yet, strange to say, I beheld vast level regions of a character decidedly alluvial, although by far the greater portion of the hemisphere in sight was covered with innumerable volcanic mountains, conical in shape, and having more the appearance of artificial than of natural protuberances. The highest among them does not exceed three and three-quarter miles in perpendicular elevation; but a map of the volcanic districts of the Campi Phlegræi would afford to your Excellencies a better idea of their general surface than any unworthy description I might think proper to attempt. The greater part of them were in a state of evident eruption, and gave me fearfully to understand their fury and their power, by the repeated thunders of the miscalled meteoric stones,
which now rushed upwards by the balloon with a frequency more and more appalling.

April ISth. To-day I found an enormous increase in the moon's apparent bulk - and the evidently accelerated velocity of my descent began to fill me with alarm. It will be remembered that, in the earliest stage of my speculations upon the possibility of a passage to the moon, the existence, in its vicinity, of an atmosphere dense in proportion to the bulk of the planet, had entered largely into my calculations; this too in spite of many theories to the contrary, and, it may be added, in spite of a general disbelief in the existence of any lunar atmosphere at all. But, in addition to what I have already urged in regard to Encke's comet and the zodiacal light, I had been strengthened in my opinion by certain observations of Mr. Schroeter, of Lilienthal. He observed the moon, when two days and a half old, in the evening soon after sunset, before the dark part was visible, and continued to watch it until it became visible. The two cusps appeared tapering in a very sharp faint prolongation, each exhibiting its farthest extremity faintly illuminated by the solar rays, before any part of the dark hemisphere was visible. Soon afterwards, the whole dark limb became illuminated. This prolongation of the cusps beyond the semicircle, I thought, must have arisen from the refraction of the sun's rays by the moon's atmosphere. I computed, also, the height of the atmosphere (which could refract light enough into its dark hemisphere to produce a twilight more luminous than the light reflected from the earth when the moon is about $32^{\circ}$ from the new) to be 1,356 Paris feet; in this view, I supposed the greatest height capable of refracting
the solar ray to be 5,376 feet. My ideas upon this topic had also received confirmation by a passage in the eighty-second volume of the Philosophical Transactions, in which it is stated that, at an occultation of Jupiter's satellites, the third disappeared after having been about $\mathrm{I}^{\prime \prime}$ or $2^{\prime \prime}$ of time indistinct, and the fourtl: became indiscernible near the limb. ${ }^{1}$

Upon the resistance, or more properly, upon the support of an atmosphere, existing in the state of density imagined, I had, of course, entirely depended for the safety of my ultimate descent. Should I then, after all, prove to have been mistaken, I had in consequence nothing better to expect, as a finale to my adventure, than being dashed into atoms against the rugged surface of the satellite. And, indeed, I had now every reason to be terrified. My distance from the moon was comparatively trifling, while the labor required by the condenser was diminished not at all, and I could discover no indication whatever of a decreasing rarity in the air.

1 Hevelius writes that he has several times found, in skies perfectly clear, when even stars of the sixth and seventh magnitude were conspicuous, that, at the same altitude of the moon, at the same elongation from the earth, and with one and the same excellent telescope, the moon and its maculæ did not appear equally lucid at all times. From the circumstances of the observation, it is evident that the cause of this phenomenon is not either in our air, in the tube, in the moon, or in the eye of the spectator, but must be looked for in something (an atmosphere?) existing about the moon.

Cassini frequently observed Saturn, Jupiter, and the fixed stars, when approaching the moon to occultation, to have their circular figure changed into an oval one; and, in other occultations, he found no alteration of figure at all. Hence it might be supposed, that at some times, and not at others, there is a dense matter encompassing the moon wherein the rays of the stars are refracted.

April igth. This morning, to my great joy, about nine o'clock, the surface of the moon being frightfully near, and my apprehensions excited to the utmost, the pump of my condenser at length gave evident tokens of an alteration in the atmosphere. By ten, I had reason to believe its density considerably increased. By eleven, very little labor was necessary at the apparatus; and at twelve o'clock, with some hesitation, I ventured to unscrew the tourniquet, when, finding no inconvenience from having done so, I finally threw open the gum-elastic chamber, and unrigged it from around the car. As might have been expected, spasms and violent headache were the immediate consequences of an experiment so precipitate and full of danger. But these and other difficulties attending respiration, as they were by no means so great as to put me in peril of my life, I determined to endure as I best could, in consideration of my leaving them behind me momently in my approach to the denser strata near the moon. This approach, however, was still impetuous in the extreme; and it soon became alarmingly certain that, although I had probably not been deceived in the expectation of an atmosphere dense in proportion to the mass of the satellite, still I had been wrong in supposing this density, even at the surface, at all adequate to the support of the great weight contained in the car of my balloon. Yet this should have been the case, and in an equal degree as at the surface of the earth, the actual gravity of bodies at either planet supposed in the ratio of the atmospheric condensation. That it was not the case, however, my precipitous downfall gave testimony enough; why it was not so, can only be explained by a reference to those possible geo-
logical disturbances to which I have formerly alluded. At all events I was now close upon the planet, and coming down with the most terrible impetuosity. I lost not a moment, accordingly, in throwing overboard first my ballast, then my water-kegs, then my condensing apparatus and gum-elastic chamber, and finally every article within the car. But it was all to no purpose. I still fell with horrible rapidity, and was now not more than half a mile from the surface. As a last resource, therefore, having got rid of my coat, hat, and boots, I cut loose from the balloon the car itself, which was of no inconsiderable weight, and thus, clinging with both hands to the network, I had barely time to observe that the whole country, as far as the eye could reach, was thickly interspersed with diminutive habitations, ere I tumbled headlong into the very heart of a fantastical-looking city, and into the middle of a vast crowd of ugly little people, who none of them uttered a single syllable, or gave themselves the least trouble to render me assistance, but stood, like a parcel of idiots, grinning in a ludicrous manner, and eying me and my balloon askant, with their arms set alimbo. I turned from them in contempt, and, gazing upwards at the earth so lately left, and left perhaps forever, beheld it like a huge, dull, copper shield, about two degrees in diameter, fixed immovably in the heavens overhead, and tipped on one of its edges with a crescent border of the most brilliant gold. No traces of land or water could be discovered, and the whole was clouded with variable spots, and belted with tropical and equatorial zones.

Thus, may it please your Excellencies, after a series of great anxieties, unheard-of dangers, and unparal-
leled escapes, I had, at length, on the nineteenth day of my departure from Rotterdam, arrived in safety at the conclusion of a voyage undoubtedly the most extraordinary and the most momentous ever accomplished, undertaken, or conceived by any denizen of earth. But my adventures yet remain to be related. And indeed your Excellencies may well imagine that, after a residence of five years upon a planet not only deeply interesting in its own peculiar character, but rendered doubly so by its intimate connection, in capacity of satellite, with the world inhabited by man, I may have intelligence for the private ear of the States' College of Astronomers of far more importance than the details, however wonderful, of the mere voyage which so happily concluded. This is, in fact, the case. I have much - very much which it would give me the greatest pleasure to communicate. I have much to say of the climate of the planet ; of its wonderful alternations of heat and cold; of unmitigated and burning sunshine for one fortnight, and more than polar frigidity for the next; of a constant transfer of moisture, by distillation like that in vacuo, from the point beneath the sun to the point the farthest from it; of a variable zone of running water; of the people themselves; of their manners, customs, and political institutions; of their peculiar physical construction; of their ugliness; of their want of ears, those useless appendages in an atmosphere so peculiarly modified; of their consequent ignorance of the use and properties of speech; of their substitute for speech in a singular method of intercommunication; of the incomprehensible connection between each particular individual in the moon with some particular individual on the earth - a connection analogous with and depend-
ing upon that of the orbs of the planet and the satellite, and by means of which the lives and destinies of the inhabitants of the one are interwoven with the lives and destinies of the inhabitants of the other; and above all, if it so please your Excellencies, -above all of those dark and hideous mysteries which lie in the outer regions of the moon, - regions which, owing to the almost miraculous accordance of the satellite's rotation on its own axis with its sidereal revolution about the earth, have never yet been turned, and, by God's mercy, never shall be turned, to the scrutiny of the telescopes of man. All this, and more - much more - would I most willingly detail. But, to be brief, I must have my reward. I am pining for a return to my family and to my home; and as the price of any farther communications on my part - in consideration of the light which I have it in my power to throw upon many very important branches of physical and metaphysical science - I must solicit, through the influence of your honorable body, a pardon for the crime of which I have been guilty in the death of the creditors upon my departure from Rotterdam. This, then, is the object of the present paper. Its bearer, an inhabitant of the moon, whom I have prevailed upon, and properly instructed, to be my messenger to the earth, will await your Excellencies' pleasure, and return to me with the pardon in question, if it can in any manner be obtained.

I have the honor to be, \&c., your Excellencies' very humble servant.

Hans Pfaall.
Upon finishing the perusal of this very extraordinary document, Professor Rubadub, it is said, dropped his pipe upon the ground in the extremity of his surprise,

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and Mynheer Superbus Von Underduk having taken off his spectacles, wiped them, and deposited them in his pocket, so far forgot both himself and his dignity as to turn round three times upon his heel in the quintessence of astonishment and admiration. There was no doubt about the matter - the pardon should be obtained. So at least swore, with a round oath, Professor Rubadub, and so finally thought the illustrious Von Underduk, as he took the arm of his brother in science and, without saying a word, began to make the best of his way home to deliberate upon the measures to be adopted. Having reached the door, however, of the burgomaster's dwelling, the professor ventured to suggest that as the messenger had thought proper to disappear - no doubt frightened to death by the savage appearance of the burghers of Rotterdam - the pardon would be of little use, as no one but a man of the moon would undertake a voyage to so vast a distance. To the truth of this observation the burgomaster assented, and the matter was therefore at an end. Not so, however, rumors and speculations. The letter, having been published, gave rise to a variety of gossip and opinion. Some of the overwise even made themselves ridiculous by decrying the whole business as nothing better than a hoax. But hoax, with this sort of people, is, I believe, a general term for all matters above their comprehension. For my part, I cannot conceive upon what data they have founded such an accusation. Let us see what they say: -

Imprimis. That certain wags in Rotterdam have certain especial antipathies to certain burgomasters and astronomers.

Secondly. That an odd little dwarf and bottle con-
jurer, both of whose ears, for some misdemeanor, have been cut off close to his head, has been missing for several days from the neighboring city of Bruges.

Thirdly. That the newspapers which were stuck all over the little balloon, were newspapers of Holland, and therefore could not have been made in the moon. They were dirty papers - very dirty - and Gluck, the printer, would take his bible oath to their having been printed in Rotterdam.

Fourthly. That Hans Pfaall himself, the drunken villain, and the three very idle gentlemen styled his creditors, were all seen, no longer than two or three days ago, in a tippling house in the suburbs, having just returned, with money in their pockets, from a trip beyond the sea.

Lastly. That it is an opinion very generally received, or which ought to be generally received, that the College of Astronomers in the city of Rotterdam, as well as all other colleges in all other parts of the world, - not to mention colleges and astronomers in general, - are, to say the least of the matter, not a whit better. nor greater, nor wiser than they ought to be.

Note. - Strictly speaking, there is but little similarity between the above sketchy trifle and the celebrated " Moon-Story" of Mr. Locke; but as both have the character of hoaxes (although the one is in a tone of banter, the other of downright earnest), and as both hoaxes are on the same subject, the moon-moreover, as both attempt to give plausibility by scientific detail - the author of "Hans Pfaall" thinks it necessary to say, in self-defence, that his own jeu d'esprit was published, in the "Southern Literary Messenger," about three weeks before the commencement
of Mr. L.'s in the New York " Sun." Fancying a likeness which, perhaps, does not exist, some of the New York papers copied "Hans Pfaall," and collated it with the "Moon-Hoax," by way of detecting the writer of the one in the writer of the other.

As many more persons were actually gulled by the " Moon-Hoax" than would be willing to acknowledge the fact, it may here afford some little amusement to show why no one should have been deceived - to point out those particulars of the story which should have been sufficient to establish its real character. Indeed, however rich the imagination displayed in this ingenious fiction, it wanted much of the force which might have been given it by a more scrupulous attention to facts and to general analogy. That the public were misled, even for an instant, merely proves the gross ignorance which is so generally prevalent upon subjects of an astronomical nature.

The moon's distance from the earth is, in round numbers, 240,000 miles. If we desire to ascertain how near, apparently, a lens would bring the satellite (or any distant object) we, of course, have but to divide the distance by the magnifying, or, more strictly, by the space-penetrating power of the glass. Mr. L. makes his lens have a power of 42,000 times. By this divide 240,000 (the moon's real distance), and we have five miles and five sevenths, as the apparent distance. No animal at all could be seen so far; much less the minute points particularized in the story. Mr. L. speaks about Sir John Herschel's perceiving flowers (the Papaver rhœas, $\& \mathrm{c}$.) and even detecting the color and the shape of the eyes of small birds. Shortly before, too, he has himself observed that the lens would not render perceptible objects of less than eighteen inches in diameter; but even this, as I have said, is giving the glass by far too great power. It may be observed, in passing, that this prodigious glass is said to have been moulded at the giass-house of Messrs. Hartley and Grant, in Dumbarton ; but Messrs. H. and G.'s establishment had ceased opera-
tions for many years previous to the publication of the hoax.

On page 13 , pamphlet edition, speaking of "a hairy veil" over the eyes of a species of bison, the author says : "It immediately occurred to the acute mind of Dr. Herschel that this was a providential contrivance to protect the eyes of the animal from the great extremes of light and darkness to which all the inhabitants of our side of the moon are periodically subjected." But this cannot be thought a very "acute" observation of the Doctor's. The inhabitants of our side of the moon have, evidently, no darkness at all; so there can be nothing of the "extremes " mentioned. In the absence of the sun they have a light from the earth equal to that of thirteen full unclouded moons.

The topography throughout, even when professing to accord with Blunt's Lunar Chart, is entirely at variance with that or any other lunar chart, and even grossly at variance with itself. The points of the compass, too, are in inextricable confusion ; the writer appearing to be ignorant that, on a lunar map, these are not in accordance with terrestrial points; the east being to the left, \&c.

Deceived, perhaps, by the vague titles, Mare Nubium, Mare Tranquillitatis, Mare Facunditatis, \&c., given to the dark spots by former astronomers, Mr. L. has entered into details regarding oceans and other large bodies of water in the moon; whereas there is no astronomical point more positively ascertained than that no such bodies exist there. In examining the boundary between light and darkness (in the crescent or gibbous moon) where this boundary crosses any of the dark places, the line of division is found to be rough and jagged; but, were these dark places liquid, it would evidently be even.

The description of the wings of the man-bat, on page 21, is but a literal copy of Peter Wilkins' account of the wings of his flying islanders. This simple fact should have induced suspicion, at least, it might be thought.

On page 23, we have the following: "What a prodigious influence must our thirteen times larger globe have exercised upon this satellite when an embryo in the womb of time, the passive subject of chemical affinity!" This is very fine; but it should be observed that no astronomer would have made such a remark, especially to any "Journal of Science;" for the earth, in the sense intended, is not only thirteen, but forty-nine times larger than the moon. A similar objection applies to the whole of the concluding pages, where, by way of introduction to some discoveries in Saturn, the philosophical correspondent enters into a minute schoolboy account of that planet:- this to the Edinburgh "Journal of Science"!

But there is one point, in particular, which should have betrayed the fiction. Let us imagine the power actually possessed of seeing animals upon the moon's surface ; what would first arrest the attention of an observer from the earth ? Certainly neither their shape, size, nor any other such peculiarity, so soon as their remarkable situation. They would appear to be walking, with heels up and head down, in the manner of flies on a ceiling. The real observer would have uttered an instant ejaculation of surprise (however prepared by previous knowledge) at the singularity of their position; the fictitious observer has not even mentioned the subject, but speaks of seeing the entire bodies of such creatures, when it is demonstrable that he could have seen only the diameter of their heads!

It might as well be remarked, in conclusion, that the size, and particularly the powers of the man-bats, (for example, their ability to fly in so rare an atmosphere - if, indeed, the moon have any,) with most of the other fancies in regard to animal and vegetable existence, are at variance, generally, with all analogical reasoning on these themes; and that analogy here will often amount to conclusive demonstration. It is, perhaps, scarcely necessary to add that all the suggestions attributed to Brewster and Herschel, in the beginning of the article, about "a
transfusion of artificial light through the focal object of vision," \&c., \&c., belong to that species of figurative writing which comes, most properly, under the denomination of rigmarole.

There is a real and very definite limit to optical discovery among the stars - a limit whose nature need only be stated to be understood. If, indeed, the casting of large lenses were all that is required, man's ingenuity would ultimately prove equal to the task, and we might have them of any size demanded. But, unhappily, in proportion to the increase of size in the lens, and, consequently, of space-penetrating power, is the diminution of light from the object, by diffusion of its rays. And for this evil there is no remedy within human ability; for an object is seen by means of that light alone which proceeds from itself, whether direct or reflected. Thus the only "artificial" light which could avail Mr. Locke, would be some artificial light which he should be able to throw not upon the "focal object of vision," but upon the real object to be viewed - to wit: upon the moon. It has been easily calculated that, when the light proceeding from a star becomes so diffused as to be as weak as the natural light proceeding from the whole of the stars, in a clear and moonless night, then the star is no longer visible for any practical purpose.

The Earl of Ross telescope, lately constructed in England, has a speculum with a reflecting surface of $4,07 \mathrm{I}$ square inches; the Herschel telescope having one of only $1,8 \mathrm{ri}$. The metal of the Earl of Ross's is 6 feet diameter; it is $5 \frac{1}{2}$ inches thick at the edges, and 5 at the centre. The weight is 3 tons. The focal length is 50 feet.

I have lately read a singular and somewhat ingenious little book, whose titlepage runs thus: L'Homme dans la Lvne, ou le Voyage Chimérique fant au Monde de la Lvne, nouuellement découuert par Dominique Gonzalès, Aduanturier Espagnol, autremêt dit le Courier volant. Mus en notre langve par J. B. D. a Paris, chez Francois Plot, près la

Fontaine de Saint Benoist. Et chez J. Goignard, au premzer filier de la grand' salle du Palais, proche les Consultations, MDCXLVIII. pp. 176.

The writer professes to have translated his work from the English of one Mr. D'Avisson (Davidson ?) although there is a terrible ambiguity in the statement. "I'en ai eu," says he, "l'original de Monsieur D'Avisson, médecin des mieux versez qui soient aujourd'luy dans la cònoissance des Belles Lettres, et sur tout de la Philosophie Naturelle. Fe lui ai cette obligation entre les autres, de m'auoir non seulement mis en main ce Livre en anglois, mais encore le Manuscrit du Sieur Thomas D'Anan, gentilhomme Eccossois, recommandable pour sa vertu, sur la version duquel j'advoue que j'ay tiré le plan de la mienne."

After some irrelevant adventures, much in the manner of Gil Blas, and which occupy the first thirty pages, the author relates that, being ill during a sea voyage, the crew abandoned him, together with a negro servant, on the island of St. Helena. To increase the chances of obtaining food, the two separate, and live as far apart as possible. This brings about a training of birds, to serve the purpose of carrier-pigeons between them. By and by these are taught to carry parcels of some weight - and this weight is gradually increased. At length the idea is entertained of uniting the force of a great number of the birds, with a view to raising the author himself. A machine is contrived for the purpose, and we have a minute description of it, which is materially helped out by a steel engraving. Here we perceive the Signor Gonzales, with point ruffles and a huge periwig, seated astride something which resembles very closely a broomstick, and borne aloft by a multitude of wild swans (ganzas) who had strings reaching from their tails to the machine.

The main event detailed in the Signor's narrative depends upon a very important fact, of which the reader is kept in ignorance until near the end of the book. The ganzas, with whom he had become so familiar, were not
really denizens of St. Helena, but of the moon. Thence it had been their custom, time out of mind, to migrate annually to some portion of the earth. In proper season, of course they would return home; and the author, happening one day to require their services for a short voyage, is unexpectedly carried straight up, and in a very brief period arrives at the satellite. Here he finds, among other odd things, that the people enjoy extreme happiness; that they have no law; that they die without pain; that they are from ten to thirty feet in height; that the live five thousand years; that they have an emperor called Irdonozur; and that they can jump sixty feet high, when, being out of the gravitating influence, they fly about with fans.

I cannot forbear giving a specimen of the general philosothy of the volume.
"I must now declare to you," says the Signor Gonzales, "the nature of the place in which I found myself. All the clouds were beneath my feet, or, if you please, spread between me and the earth. As to the stars, since there was no night where I was, they alzways had the same appear. ance; not brilliant, as usual, but pale, and very nearly like the moon of a morning. But few of them were visible, and these ten times larger (as well as I could judge) than they seem to the inhabitants of the earth. The moon, which wanted two days of being full, was of a terrible bigness.
" I must not forget, here, that the stars appeared only on that side of the globe turned towards the moon, and that the closer they were to it the larger they seemed. I have also to inform you that, whether it was calm weather or stormy, I found myself always immediately between the moon and the earth. I was convinced of this for two reasons - because my birds always flew in a straight line; and because whenever we attempted to rest, we were carried insensibly around the globe of the earth. For I admit the opinion of Copernicus, who maintains that it
never ceases to revolve from the east to the west, not upon the poles of the Equinoctial, commonly called the poles of the world, but upon those of the Zodiac, a question of which I propose to speak more at length hereafter, when I shall have leisure to refresh my memory in regard to the astrology which I learned at Salamanca when young, and have since forgotten."

Notwithstanding the blunders italicized, the book is not without some claim to attention, as affording a nave specimer $_{r}$ - he current astronomical notions of the time. One or 1 se assumed that the "gravitating power" extended but a short distance from the earth's surface, and, accordingly, we find our voyager "carried insensibly around the globe," \&c.

There have been other "voyages to the moon," but none of higher merit than the one just mentioned. That of Bergerac is utterly meaningless. In the third volume of the "American Quarterly Review" will be found quite an elaborate criticism upon a certain "Journey" of the kind in question; - a criticism in which it is difficult to say whether the critic most exposes the stupidity of the book, or his own absurd ignorance of astronomy. I forget the title of the work; but the means of the voyage are more deplorably ill-conceived than are even the ganzas of our friend the Signor Gonzales. The adventurer, in digging the earth, happens to discover a peculiar metal for which the moon has a strong attraction, and straightway constructs of it a box, which, when cast loose from its terrestrial fastenings, flies with him, forthwith, to the satellite. The "Flight of Thomas O'Rourke" is a jeu d'esprit not altogether contemptible, and has been translated into German. Thomas, the hero, was, in fact, the game-keeper of an Irish peer, whose eccentricities gave rise to the tale. The "flight" is made on an eagle's back, from Hungry Hill, a lofty mountain at the end of Bantry Bay

In these various brochures the aim is always satirical;
the theme being a description of Lunarian customs as compared with ours. In none, is there any effort at plausibility in the details of the voyage itself. The writers seem, in each instance, to be utterly uninformed in respect to astronomy. In "Hans Pfaall" the design is original, inasmuch as regards an attempt at verisimilitude, in the application of scientific principles (so far as the whimsical nature of the subject would permit) to the actual passage between the earth and the moon.

## THE BALLOON HOAX


#### Abstract

Astounding News by Express, via Norfolk!-The Atlantic crossed in Three Days! Signal Triumph of Mr. Monck Mason's Flying Machine ! - Arrival at Sullivan's Island, near Charleston, S. C., of Mr. Mason, Mr. Robert Holland, Mr. Henson, Mr. Harrison Ainsworth, and four others, in the Steering Balloon "Victoria," after a passage of Seventy-five Hours from Land to Land! Full Particulars of the Voyage! [Note by the Author. - The subjoined jeu d'esprit with the preceding heading in magnificent capitals, well interspersed with notes of admiration, was originally published, as matter of fact, in the New York "Sun," a daily newspaper, and therein fully subserved the purpose of creating indigestible aliment for the quidnuncs during the few hours intervening between a couple of the Charleston mails. The rush for the "sole paper which had the news" was something beyond even the prodigious; and, in fact, if (as some assert) the "Victoria" did not absolutely accomplish the voyage recorded, it will be difficult to assign a reason why she should not have accomplished it.]


THE great problem is at length solved! The air, as well as the earth and the ocean, has been subdued by science, and will become a common and convenient highway for mankind. The Atlantic has been actually crossed in a Balloon! and this too without difficulty - without any great apparent danger - with thorough control of the machine - and in the inconceivably brief period of seventy-five hours from shore to shore! By the energy of an agent at Charleston, S. C., we are enabled to be the first to furnish the public with a
detailed account of this most extraordinary voyage, which was performed between Saturday, the 6th instant, at if, A.m., and 2, P.m., on Tuesday, the 9th instant, by Sir Everard Bringhurst; Mr. Osborne, a nephew of Lord Bentinck's; Mr. Monck Mason and Mr. Robert Holland, the well-known aeronauts; Mr. Harrison Ainsworth, author of "Jack Sheppard," \&c.; and Mr. Henson, the projector of the late unsuccessful flying machine - with two seamen from Woolwich in all, eight persons. The particulars furnished below may be relied on as authentic and accurate in every respect, as, with a slight exception, they are copied verbatim from the joint diaries of Mr. Monck Mason and Mr. Harrison Ainsworth, to whose politeness our agent is also indebted for much verbal information respecting the balloon itself, its construction, and other matters of interest. The only alteration in the MS. received has been made for the purpose of throwing the hurried account of our agent, Mr. Forsyth, into a connected and intelligible form.

## THE BALLOON.

Two very decided failures, of late - those of Mr. Henson and Sir George Cayley - had much weak. ened the public interest in the subject of aerial navigation. Mr. Henson's scheme (which at first was considered very feasible even by men of science) was founded upon the principle of an inclined plane, started from an eminence by an extrinsic force, applied and continued by the revolution of impinging vanes, in form and number resembling the vanes of a windmill. But, on all the experiments made with models at the Adelaide Gallery, it was found that the
operation of these fans not only did not propel the machine, but actually impeded its flight. The only propelling force it ever exhibited was the mere impetus acquired from the descent of the inclined plane; and this impetus carried the machine farther when the vanes were at rest than when they were in motion - a fact which sufficiently demonstrates their inutility; and in the absence of the propelling, which was also the sustaining power, the whole fabric would necessarily descend. This consideration led Sir George Cayley to think only of adapting a propeller to some machine having of itself an independent power of support - in a word, to a balloon; the idea, however, being novel, or original, with Sir George, only so far as regards the mode of its application to practice. He exhibited a model of his invention at the Polytechnic Institution. The propelling principle, or power, was here, also, applied to interrupted surfaces, or vanes, put in revolution. These vanes were four in number, but were found entirely ineffectual in moving the balloon, or in aiding its ascending power. The whole project was thus a complete failure.

It was at this juncture that Mr. Monck Mason (whose voyage from Dover to Weilburg in the balloon "Nassau" occasioned so much excitement in 1837) conceived the idea of employing the principle of the Archimedean screw for the purpose of propulsion through the air - rightiy attributing the failure of Mr. Henson's scheme, and of Sir George Cayley's, to the interruption of surface in the independent vanes. He made the first public experiment at Willis's Rooms, but afterwards removed his model to the Adelaide Gallery.

Like Sir George Cayley's balloon, his own was an 206
ellipsoid. Its length was thirteen feet six inches height, six feet eight inches. It contained about three hundred and twenty cubic feet of gas, which, if pure hydrogen, would support twenty-one pounds upon its first inflation, before the gas has time to deteriorate or escape. The weight of the whole machine and apparatus was seventeen pounds - leaving about four pounds to spare. Beneath the centre of the balloon, was a frame of light wood, about nine feet long, and rigged on to the balloon itself with a network in the customary manner. From this framework was suspended a wicker basket or car.

The screw consists of an axis of hollow brass tube, eighteen inches in length, through which, upon a semi-spiral inclined at fifteen degrees, pass a series of steel wire radii, two feet long, and thus projecting a foot on either side. These radii are connected at the outer extremities by two bands of flattened wire - the whole in this manner forming the framework of the screw, which is completed by a covering of oiled silk cut into gores, and tightened so as to present a tolerably uniform surface. At each end of its axis this screw is supported by pillars of hollow brass tube descending from the hoop. In the lower ends of these tubes are holes in which the pivots of the axis revolve. From the end of the axis which is next the car proceeds a shaft of steel, connecting the screw with the pinion of a piece of spring machinery fixed in the car. By the operation of this spring the screw is made to revolve with great rapidity, communicating a progressive motion to the whole. By means of the rudder the machine was readily turned in any direction. The spring was of great power, compared with its dimensions, being capable of raising
forty-five pounds upon a barrel of four inches diameter, after the first turn, and gradually increasing as it was wound up. It weighed, altogether, eight pounds six ounces. The rudder was a light frame of cane covered with silk, shaped somewhat like a battledoor, and was about three feet long, and at the widest, one foot. Its weight was about two ounces. It could be turned flat, and directed upwards or downwards, as well as to the right or left; and thus enabled the aeronaut to transfer the resistance of the air, which in an inclined position it must generate in its passage, to any side upon which he might desire to act; thus determining the balloon in the opposite direction,

This model (which, through want of time, we have necessarily described in an imperfect manner) was put in action at the Adelaide Gallery, where it accomplished a velocity of five miles per hour; although, strange to say, it excited very little interest in comparison with the previous complex machine of Mr. Henson - so resolute is the world to despise anything which carries with it an air of simplicity. To accomplish the great desideratum of aerial navigation, it was very generally supposed that some exceedingly complicated application must be made of some unusually profound principle in dynamics.

So well satisfied, however, was Mr. Mason of the ultimate success of his invention, that he determined to construct immediately, if possible, a balloon of sufficient capacity to test the question by a voyage of some extent - the original design being to cross the British Channel, as before, in the Nassau balloon. To carry out his views, he solicited and obtained the patronage of Sir Everard Bringhurst and Mr. Osborne, two gentlemen well known for scientific acquire-
ment, and especially for the interest they have exhibited in the progress of aerostation. The project, at the desire of Mr. Osborne, was kept a profound secret from the public - the only persons intrusted with the design being those actually engaged in the construction of the machine, which was built (under the superintendence of Mr. Mason, Mr. Holland, Sir Everard Bringhurst, and Mr. Osborne) at the seat of the latter gentleman near Penstruthal, in Wales. Mr. Henson, accompanied by his friend Mr. Ainsworth, was admitted to a private view of the balloon on Saturday last - when the two gentlemen made final arrangements to be included in the adventure. We are not informed for what reason the two seamen were also included in the party - but, in the course of a day or two, we shall put our readers in possession of the minutest particulars respecting this extraordinary voyage.

The balloon is composed of silk, varnished with the liquid gum caoutchouc. It is of vast dimensions, containing more than 40,000 cubic feet of gas; but, as coal gas was employed in place of the more expensive and inconvenient hydrogen, the supporting power of the machine, when fully inflated, and immediately after inflation, is not more than about 2,500 pounds. The coal gas is not only much less costly, but is easily procured and managed.

For its introduction into common use for purposes of aerostation, we are indebted to Mr. Charles Green. Up to his discovery, the process of inflation was not only exceedingly expensive, but uncertain. Two, and even three, days have frequently been wasted in futile attempts to procure a sufficiency of hydrogen to fill a balloon, from which it had great tendency to escape

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owing to its extreme subtlety, and its affinity for the surrounding atmosphere. In a balloon sufficiently perfect to retain its contents of coal-gas unaltered, in quality or amount, for six months, an equal quantity of hydrogen could not be maintained in equal purity for six weeks.

The supporting power being estimated at 2,500 pounds, and the united weights of the party amounting only to about 1,200 , there was left a surplus of 1,300, of which again 1,200 was exhausted by ballast, arranged in bags of different sizes, with their respective weights marked upon them - by cordage, barometers, telescopes, barrels containing provision for a fortnight, water-casks, cloaks, carpet-bags, and various other indispensable matters, including a coffee-warmer, contrived for warming coffee by means of slack-lime, so as to dispense altogether with fire, if it should be judged prudent to do so. All these articles, with the exception of the ballast, and a few trifles, were suspended from the hoop over head. The car is much smaller and lighter, in proportion, than the one appended to the model. It is formed of a light wicker, and is wonderfully strong for so frail looking a machine. Its rim is about four feet deep. The rudder is also very much larger, in proportion, than that of the model; and the screw is considerably smaller. The balloon is furnished, besides, with a grapnel and a guide-rope; which latter is of the most indispensable importance. A few words, in explanation, will here be necessary for such of our readers as are not conversant with the details of aerostation.

As soon as the balloon quits the earth, it is subjected to the influence of many circumstances tending to create a difference in its weight; augmenting or
diminishing its ascending power. For example, there may be a deposition of dew upon the silk, to the extent, even, of several hundred pounds; ballast has then to be thrown out, or the machine may descend. This ballast being discarded, and a clear sunshine evaporating the dew and at the same time expanding the gas in the silk, the whole will again rapidly ascend. To check this ascent, the only resource is (or rather was, until Mr. Green's invention of the guide-rope) the permission of the escape of gas from the valve; but, in the loss of gas, is a proportionate general loss of ascending power; so that, in a comparatively brief period, the best constructed balloon must necessarily exhaust all its resources, and come to the earth. This was the great obstacle to voyages of length.

The guide-rope remedies the difficulty in the simplest manner conceivable. It is merely a very long rope which is suffered to trail from the car, and the effect of which is to prevent the balloon from changing its level in any material degree. If, for example, there should be a deposition of moisture upon the silk, and the machine begins to descend in consequence, there will be no necessity for discharging ballast to remedy the increase of weight, for it is remedied, or counteracted, in an exactly just proportion, by the deposit on the ground of just so much of the end of the rope as is necessary. If, on the other hand, any circumstances should cause undue levity, and consequent ascent, this levity is immediately counteracted by the additional weight of rope upraised from the earth. Thus, the balloon can neither ascend nor descend, except within very narrow limits, and its resources, either in gas or ballast, remain comparatively unimpaired. When passing over an expanse of water, it
becomes necessary to employ small kegs of copper or wood, filled with liquid ballast of a lighter nature than water. These float, and serve all the purposes of a mere rope on land. Another most important office of the guide-rope is to point out the direction of the balloon. The rope drags, either on land or sea, while the balloon is free; the latter, consequently, is always in advance, when any progress whatever is made: a comparison, therefore, by means of the compass, of the relative positions of the two objects, will always indicate the course. In the same way, the angle formed by the rope with the vertical axis of the machine indicates the velocity. When there is no angle - in other words, when the rope hangs perpendicularly, the whole apparatus is stationary; but the larger the angle, that is to say, the farther the balloon precedes the end of the rope, the greater the velocity; and the converse.

As the original design was to cross the British Channel and alight as near Paris as possible, the voyagers had taken the precaution to prepare themselves with passports directed to all parts of the Continent, specifying the nature of the expedition, as in the case of the "Nassau" voyage, and entitling the adventurers to exemption from the usual formalities of office ; unexpected events, however, rendered these passports superfluous.

The inflation was commenced very quietly at daybreak, on Saturday morning, the 6th instant, in the Court-yard of Wheal-Vor House, Mr. Osborne's seat, about a mile from Penstruthal, in North Wales; and at seven minutes past eleven, everything being ready for departure, the balloon was set free, rising gently but steadily, in a direction nearly south; no use being
made, for the first half hour, of either the screw or the rudder. We proceed now with the journal, as transcribed by Mr. Forsyth from the joint MSS. of Mr. Monck Mason and Mr. Ainsworth. The body of the journal, as given, is in the handwriting of Mr. Mason, and a P. S. is appended, each day, by Mr. Ainsworth, who has in preparation, and will shortly give the public, a more minute and, no doubt, a thrillingly interesting account of the voyage.

## THE JOURNAL.

Saturday, April the 6th. - Every preparation likely to embarrass us having been made over night, we commenced the inflation this morning at day. break; but owing to a thick fog, which encumbered the folds of the silk and rendered it unmanageable, we did not get through before nearly eleven o'clock. Cut loose, then, in high spirits, and rose gently but steadily, with a light breeze at north, which bore us in the direction of the British Channel. Found the ascending force greater than we had expected; and as we arose higher and so got clear of the cliffs, and more in the sun's rays, our ascent became very rapid. I did not wish, however, to lose gas at so early a period of the adventure, and so concluded to ascend for the present. We soon ran out our guide-rope ; but even when we had raised it clear of the earth, we still went up very rapidly. The balloon was unusually steady, and looked beautiful. In about ten minutes after starting, the barometer indicated an altitude of 15,000 feet. The weather was remarkably fine, and the view of the subjacent country - a most romantic one when seen from any point - was now especially
sublime. The numerous deep gorges presented the appearance of lakes, on account of the dense vapors with which they were filled, and the pinnacles and crags, to the south-east, piled in inextricable confusion, resembled nothing so much as the giant cities of eastern fable. We were rapidly approaching the mountains in the south; but our elevation was more than sufficient to enable us to pass them in safety. In a few minutes we soared over them in fine style; and Mr. Ainsworth, with the seamen, were surprised at their apparent want of altitude when viewed from the car, the tendency of great elevation in a balloon being to reduce inequalities of the surface below to nearly a dead level. At half-past eleven still proceeding nearly south, we obtained our first view of the Bristol Channel; and, in fifteen minutes afterwards, the line of breakers on the coast appeared immediately beneath us, and we were fairly out at sea. We now resolved to let off enough gas to bring our guiderope, with the buoys affixed, into the water. This was immediately done, and we commenced a gradual descent. In about twenty minutes our first buoy dipped, and at the touch of the second soon afterwards, we remained stationary as to elevation. We were all now anxious to test the efficiency of the rudder and screw, and we put them both into requisition forthwith, for the purpose of altering our direction more to the eastward, and in a line for Paris. By means of the rudder we instantly effected the necessary change of direction, and our course was brought nearly at right angles to that of the wind; when we set in motion the spring of the screw, and were rejoiced to find it propel us readily as desired. Upon this we gave nine hearty cheers, and dropped in the
sea a bottle, enclosing a slip of parchment with a brief account of the principle of the invention. Hardly, however, had we done with our rejoicings, when an unforeseen accident occurred which discouraged us in no little degree. The steel rod connecting the spring with the propeller was suddenly jerked out of place, at the car end (by a swaying of the car through some movement of one of the two seamen we had taken up), and in an instant hung dangling out of reach, from the pivot of the axis of the screw. While we were endeavoring to regain it, our attention being completely absorbed, we became involved in a strong current of wind from the east, which bore us, with rapidly increasing force, towards the Atlantic. We soon found ourselves driving out to sea at the rate of not less, certainly, than fifty or sixty miles an hour, so that we came up with Cape Clear, at some forty miles to our north, before we had secured the rod and had time to think what we were about. It was now that Mr. Ainsworth made an extraordinary, but to my fancy, a by no means unreasonable or chimerical proposition, in which he was instantly seconded by Mr. Holland - viz., that we should take advantage of the strong gale which bore us on, and, in place of beating back to Paris, make an attempt to reach the coast of North America. After slight reflection I gave a willing assent to this bold proposition, which (strange to say) met with objection from the two seamen only. As the stronger party, however, we overruled their fears, and kept resolutely upon our course. We steered due west; but as the trailing of the buoys materially impeded our progress, and we had the balloon abundantly at command, either for ascent or descent, we first threw out fifty pounds of ballast,
and then wound up (by means of a windlass) so much of a rope as brought it quite clear of the sea. We perceived the effect of this manœuvre immediately, in a vastly increased rate of progress; and, as the gale freshened, we flew with a velocity nearly inconceivable; the guide-rope flying out behind the car like a streamer from a vessel. It is needless to say that a very short time sufficed us to lose sight of the coast. We passed over innumerable vessels of all kinds, a few of which were endeavoring to beat up, but the most of them lying to. We occasioned the greatest excitement on board all - an excitement greatly relished by ourselves, and especially by our two men, who, now under the influence of a dram of Geneva, seemed resolved to give all scruple, or fear, to the wind. Many of the vessels fired signal guns; and in all we were saluted with loud cheers (which we heard with surprising distinctness) and the waving of caps and handkerchiefs. We kept on in this manner throughout the day, with no material incident, and, as the shades of night closed around us, we made a rough estimate of the distance traversed. It could not have been less than five hundred miles, and was probably much more. The propeller was kept in constant operation, and, no doubt, aided our progress materially. As the sun went down, the gale freshened into an absolute hurricane, and the ocean beneath was clearly visible on account of its phosphorescence. The wind was from the east all night, and gave us the brightest omen of success. We suffered no little from cold, and the dampness of the atmosphere was most unpleasant; but the ample space in the car enabled us to lie down, and by means of cloaks and a few blankets we did sufficiently well.
P. S. [By Mr. Ainsworth.] The last nine hours have been unquestionably the most exciting of my life. I can conceive nothing more sublimating than the strange peril and novelty of an adventure such as this. May God grant that we succeed! I ask not success for mere safety to my insignificant person, but for the sake of human knowledge and - for the vastness of the triumph. And yet the feat is only so evidently feasible that the sole wonder is why men have scrupled to attempt it before. One single gale such as now befriends us - let such a tempest whirl forward a balloon for four or five days (these gales often last longer) and the voyager will be easily borne, in that period, from coast to coast. In view of such a gale the broad Atlantic becomes a mere lake. I am more struck, just now, with the supreme silence which reigns in the sea beneath us, notwithstanding its agitation, than with any other phenomenon presenting itself. The waters give up no voice to the heavens. The immense flaming ocean writhes and is tortured uncomplainingly. The mountainous surges suggest the idea of innumerable dumb gigantic fiends struggling in impotent agony. In a night such as is this to me, a man lives - lives a whole century of ordinary life - nor would I forego this rapturous delight for that of a whole century of ordinary existence.

Sunday, the 7th. [Mr. Mason's MS.] This morning the gale, by ten, had subsided to an eight or nine knot breeze (for a vessel at sea), and bears us, perhaps, thirty miles per hour, or more. It has veered, however, very considerably to the north; and now, at sundown, we are holding our course due west, principally by the screw and rudder, which answer their purposes to admiration. I regard the project
as thoroughly successful, and the easy navigation of the air in any direction (not exactly in the teeth of a gale) as no longer problematical. We could not have made head against the strong wind of yesterday ; but, by ascending, we might have got out of its influence, if requisite. Against a pretty stiff breeze, I feel convinced, we can make our way with the propeller. At noon, to-day, ascended to an elevation of nearly 25,000 feet, by discharging ballast. Did this to search for a more direct current, but found none so favorable as the one we are now in. We have an abundance of gas to take us across this small pond, even should the voyage last three weeks. I have not the slightest fear for the result. The difficulty has been strangely exaggerated and misapprehended. I can choose my current, and should I find all currents against me, I can make very tolerable headway still with the propeller. We have had no incidents worth recording. The night promises fair.
P. S. [By Mr. Ainsworth.] I have little to record, except the fact (to me quite a surprising one) that, at an elevation equal to that of Cotopaxi, I experienced neither very intense cold, nor headache, nor difficulty of breathing ; neither, I find, did Mr. Mason, nor Mr. Holland, nor Sir Everard. Mr. Osborne complained of constriction of the chest - but this soon wore off. We have flown at a great rate during the day, and we must be more than halfway across the Atlantic. We have passed over some twenty or thirty vessels of various kinds, and all seem to be delightfully astonished. Crossing the ocean in a balloon is not so difficult a feat after all. Omne ignotum pro magnifico. Mem.: at 25,000 feet elevation the sky appears nearly black, and the stars are distinctly visible;
while the sea does not seem convex (as one might suppose) but absolutely and most unequivocally concave. ${ }^{1}$

Monday, the 8th. [Mr. Mason's MS.] This morning we had again some little trouble with the rod of the propeller, which must be entirely remodelled, for fear of serious accident - I mean the steel rod, not the vanes. The latter could not be improved. The wind has been blowing steadily and strongly from the north-east all day; and so far fortune seems bent upon favoring us. Just before day, we were all somewhat alarmed at some odd noises and concussions in the balloon, accompanied with the apparent rapid subsidence of the whole machine. These phenomena were occasioned by the expansion of the gas, through increase of heat in the atmosphere, and the consequent disruption of the minute particles of ice with which

[^8]the network had become incrusted during the night. Threw down several bottles to the vessels below. Saw one of them picked up by a large ship - seemingly one of the New York line packets. Endeavored to make out her name, but could not be sure of it. Mr. Osborne's telescope made it out something like "Atalanta." It is now twelve, at night, and we are still going nearly west, at a rapid pace. The sea is peculiarly phosphorescent.
P. S. [By Mr. Ainsworth.] It is now two, A. m., and nearly calm, as well as I can judge - but it is very difficult to determine this point, since we move with the air so completely. I have not slept since quitting Wheal-Vor, but can stand it no longer, and must take a nap. We cannot be far from the American coast.

Tuesday, the 9th. [Mr. Ainsworth's MS.] One P. M. We are in full view of the low coast of South Carolina. The great problem is accomplished. We have crossed the Atlantic - fairly and easily crossed it in a balloon! God be praised! Who shall say that anything is impossible hereafter?

The Journal here ceases. Some particulars of the descent were communicated, however, by Mr. Ainsworth to Mr. Forsyth. It was nearly dead calm when the voyagers first came in view of the coast, which was immediately recognized by both the seamen, and by Mr. Osborne. The latter gentleman having acquaintances at Fort Moultrie, it was immediately resolved to descend in its vicinity. The balloon was brought over the beach (the tide being out and the sand hard, smooth, and admirably adapted for a descent) and the grapnel let go, which took firm hold
at once. The inhabitants of the island, and of the fort, thronged out, of course, to see the balloon; but it was with the greatest difficulty that any one could be made to credit the actual voyage - the crossing of the Atlantic. The grapnel caught at two, P. m., precisely; and thus the whole voyage was completed in seventy-five hours; or rather less, counting from shore to shore. No serious accident occurred. No real danger was at any time apprehended. The balloon was exhausted and secured without trouble; and when the MS. from which this narrative is compiled was despatched from Charleston, the party were still at Fort Moultrie. Their farther intentions were not ascertained; but we can safely promise our readers some additional information either on Monday or in the course of the next day, at farthest.

This is unquestionably the most stupendous, the most interesting, and the most important undertaking ever accomplished or even attempted by man. What magnificent events may ensue, it would be useless now to think of determining.

## MS. FOUND IN A BOTTLE

## Qui n'a plus qu'un moment à vivre

 N'a plus rien à dissimuler.Quinault: Atys.

$\mathrm{O}_{\mathrm{F}}$F my country and of my family I have little to say. Ill usage and length of years have driven me from the one, and estranged me from the other. Hereditary wealth afforded me an education of no common order, and a contemplative turn of mind enabled me to methodize the stores which early study diligently garnered up. Beyond all things, the works of the German moralists gave me great delight; not from any ill-advised admiration of their eloquent madness, but from the ease with which my habits of rigid thought enabled me to detect their falsities. I have often been reproached with the aridity of my genius; a deficiency of imagination has been imputed to me as a crime; and the Pyrrhonism of my opinions has at all times rendered me notorious. Indeed, a strong relish for physical philosophy has, I fear, tinctured my mind with a very common error of this age - I mean the habit of referring occurrences, even the least susceptible of such reference, to the principles of that science. Upon the whole, no person could be less liable than myself to be led away from the severe precincts of truth by the ignes fatui of superstition.

I have thought proper to premise thus much, lest the incredible tale I have to tell should be considered rather the raving of a crude imagination than the positive experience of a mind to which the reveries of fancy have been a dead letter and a nullity.

After many years spent in foreign travel, I sailed in the year i8-, from the port of Batavia, in the rich and populous island of Java, on a voyage to the Archipelago of the Sunda Islands. I went as passenger - having no other inducement than a kind of nervous restlessness which haunted me as a fiend.

Our vessel was a beautiful ship of about four hundred tons, copper-fastened, and built at Bombay of Malabar teak. She was freighted with cotton-wool and oil, from the Laccadive Islands. We had also on board coir, jaggeree, ghee, cocoa-nuts, and a few cases of opium. The stowage was clumsily done, and the vessel consequently crank.

We got under way with a mere breath of wind, and for many days stood along the eastern coast of Java, without any other incident to beguile the monotony of our course than the occasional meeting with some of the small grabs of the Archipelago to which we were bound.

One evening, leaning over the taffrail, I observed a very singular isolated cloud, to the N. W. It was remarkable, as well for its color, as from its being the first we had seen since our departure from Batavia. I watched it attentively until sunset, when it spread all at once to the eastward and westward, girding in the horizon with a narrow strip of vapor, and looking like a long line of low beach. My notice was soon afterwards attracted by the dusky-red appearance of the moon and the peculiar character of the sea.

The latter was undergoing a rapid change, and the water seemed more than usually transparent. Although I could distinctly see the bottom, yet, heaving the lead, I found the ship in fifteen fathoms. The air now became intolerably hot, and was loaded with spiral exhalations similar to those arising from heated iron. As night came on, every breath of wind died away, and a more entire calm it is impossible to conceive. The flame of a candle burned upon the poop without the least perceptible motion, and a long hair, held between the finger and thumb, hung without the possibility of detecting a vibration. However, as the captain said he could perceive no indication of danger, and as we were drifting in bodily to shore, he ordered the sails to be furled, and the anchor let go. No watch was set, and the crew, consisting principally of Malays, stretched themselves deliberately upon deck. I went below - not without a full presentiment of evil. Indeed, every appearance warranted me in apprehending a simoon. I told the captain my fears; but he paid no attention to what I said, and left me without deigning to give a reply. My uneasiness, however, prevented me from sleeping, and about midnight I went upon deck. As I placed my foot upon the upper step of the companion-ladder, I was startled by a loud humming noise, like that occasioned by the rapid revolution of a mill-wheel, and, before I could ascertain its meaning, I found the ship quivering to its centre. In the next instant, a wilderness of foam hurled us upon our beam-ends, and, rushing over us fore and aft, swept the entire decks from stem to stern.

The extrome fury of the blast proved, in a great measure, the salvation of the ship. Although com-
pletely water-logged, yet, as her masts had gone by the board, she rose, after a minute, heavily from the sea, and, staggering awhile beneath the immense pressure of the tempest, finally righted.

By what miracle I escaped destruction it is impossible to say. Stunned by the shock of the water, I found myself, upon recovery, jammed in between the stern-post and rudder. With great difficulty I gained my feet, and, looking dizzily around, was at first struck with the idea of our being among breakers; so terrific, beyond the wildest imagination, was the whirlpool of mountainous and foaming ocean within which we were engulfed. After a while, I heard the voice of an old Swede, who had shipped with us at the moment of leaving port. I hallooed to him with all my strength, and presently he came reeling aft. We soon discovered that we were the sole survivors of the accident. All on deck, with the exception of ourselves, had been swept overboard; the captain and mates must have perished as they slept, for the cabins were deluged with water. Without assistance, we could expect to do little for the security of the ship, and our exertions were at first paralyzed by the momentary expectation of going down. Our cable had, of course, parted like pack-thread, at the first breath of the hurricane, or we should have been instantaneously overwhelmed. We scudded with frightful velocity before the sea, and the water made clear breaches over us. The framework of our stern was shattered excessively, and, in almost every respect, we had received considerable injury; but to our extreme joy we found the pumps unchoked, and that we had made no great shifting of our ballast. The main fury of the blast had already blown over,

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and we apprehended little danger from the violence of the wind; but we looked forward to its total cessation with dismay; well believing that, in our shattered condition, we should inevitably perish in the tremendous swell which would ensue. But this very just apprehension seemed by no means likely to be soon verified. For five entire days and nights - during which our only subsistence was a small quantity of jaggeree, procured with great difficulty from the forecastle - the hulk flew at a rate defying computation, before rapidly succeeding flaws of wind, which, without equalling the first violence of the simoon, were still more terrific than any tempest I had before encountered. Our course for the first four days was, with trifling variations, S. E. and by S.; and we must have run down the coast of New Holland. On the fifth day the cold became extreme, although the wind had hauled round a point more to the northward. The sun arose with a sickly yellow lustre, and clambered a very few degrees above the horizon - emitting no decisive light. There were no clouds apparent, yet the wind was upon the increase, and blew with a fitful and unsteady fury. About noon, as nearly as we could guess, our attention was again arrested by the appearance of the sun. It gave out no light, properly so called, but a dull and sullen glow without reflection, as if all its rays were polarized. Just before sinking within the turgid sea, its central fires suddenly went out, as if hurriedly extinguished by some unaccountable power. It was a dim, silver-like rim, alone, as it rushed down the unfathomable ocean.

We waited in vain for the arrival of the sixth day that day to me has not arrived - to the Swede, never
did arrive. Thenceforward we were enshrouded in pitchy darkness, so that we could not have seen an object at twenty paces from the ship. Eternal night continued to envelop us, all unrelieved by the phosphoric sea-brilliancy to which we had been accustomed in the tropics. We observed, too, that, although the tempest continued to rage with unabated violence, there was no longer to be discovered the usual appearance of surf, or foam, which had hitherto attended us. All around were horror and thick gloom, and a black sweltering desert of ebony Superstitious terror crept by degrees into the spirit of the old Swede, and my own soul was wrapped up in silent wonder. We neglected all care of the ship, as worse than useless, and securing ourselves, as well as possible, to the stump of the mizzen-mast, looked out bitterly into the world of ocean. We had no means of calculating time, nor could we form any guess of our situation. We were, however, well aware of having made farther to the southward than any previous navigators, and felt great amazement at not meeting with the usual impediments of ice. In the mean time every moment threatened to be our last - every mountainous billow hurried to overwhelm us. The swell surpassed anything I had imagined possible, and that we were not instantly buried is a miracle. My companion spoke of the lightness of our cargo, and reminded me of the excellent qualities of our ship; but I could not help feeling the utter hopelessness of hope itself, and prepared myself gloomily for that death which I thought nothing could defer beyond an hour, as, with every knot of way the ship made, the swelling of the black stupendous seas became more dismally appalling. At times we gasped for breath at an elevation beyond the
albatross - at times became dizzy with the velocity of our descent into some watery hell, where the air grew stagnant, and no sound disturbed the slumbers of the kraken.

We were at the bottom of one of these abysses, when a quick scream from my companion broke fearfully upon the night. "See! see!" cried he, shrieking in my ears, "Almighty God! see! see!" As he spoke, I became aware of a dull, sullen glare of red light which streamed down the sides of the vast chasm where we lay, and threw a fitful brilliancy upon our deck. Casting my eyes upwards, I beheld a spectacle which froze the current of my blood. At a terrific height directly above us, and upon the very verge of the precipitous descent, hovered a gigantic ship, of perhaps four thousand tons. Although upreared upon the summit of a wave more than a hundred times her own altitude, her apparent size still exceeded that of any ship of the line or East Indiaman in existence. Her huge hull was of a deep dingy black, unrelieved by any of the customary carvings of a ship. A single row of brass cannon protruded from her open ports, and dashed from their polished surfaces the fires of innumerable battle-lanterns which swung to and fro about her rigging. But what mainly inspired us with horror and astonishment was that she bore up under a press of sail in the very teeth of that supernatural sea, and of that ungovernable hurricane. When we first discovered her, her bows were alone to be seen, as she rose slowly from the dim and horrible gulf beyond her. For a moment of intense terror she paused upon the giddy pinnacle, as if in contemplation of her own sublimity, then trembled and tottered, and - came down.

At this instant, I know not what sudden selfpossession came over my spirit. Staggering as far aft as I could, I awaited fearlessly the ruin that was to overwhelm. Our own vessel was at length ceasing from her struggles, and sinking with her head to the sea. The shock of the descending mass struck her, consequently, in that portion of her frame which was nearly under water, and the inevitable result was to hurl me, with irresistible violence, upon the rigging of the stranger.

As I fell, the ship hove in stays, and went about; and to the confusion ensuing I attributed my escape from the notice of the crew. With little difficulty I made my way, unperceived, to the main hatchway, which was partially open, and soon found an opportunity of secreting myself in the hold. Why I did so I can hardly tell. An indefinite sense of awe, which at first sight of the navigators of the ship had taken hold of my mind, was perhaps the principle of my concealment. I was unwilling to trust myself with a race of people who had offered, to the cursory glance I had taken, so many points of vague novelty, doubt, and apprehension. I therefore thought proper to contrive a hiding-place in the hold. This I did by removing a small portion of the shifting-boards, in such a manner as to afford me a convenient retreat between the huge timbers of the ship.

I had scarcely completed my work, when a footstep in the hold forced me to make use of it. A man passed by my place of concealment with a feeble and unsteady gait. I could not see his face, but had an opportunity of observing his general appearance. There was about it an evidence of great age and infirmity. His knees tottered beneath a load of years,
and his entire frame quivered under the burden. He muttered to himself, in a low broken tone, some words of a language which I could not understand, and groped in a corner among a pile of singular-looking instruments, and decayed charts of navigation. His manner was a wild mixture of the peevishness of second childhood and the solemn dignity of a god. He at length went on deck, and I saw him no more.

A feeling, for which I have no name, has taken possession of my soul - a sensation which will admit of no analysis, to which the lessons of by-gone time are inadequate, and for which I fear futurity itself will offer me no key. To a mind constituted like my own, the latter consideration is an evil. I shall never - I know that I shall never - be satisfied with regard to the nature of my conceptions. Yet it is not wonderful that these conceptions are indefinite, since they have their origin in sources so utterly novel. A new sense - a new entity is added to my soul.

It is long since I first trod the deck of this terrible ship, and the rays of my destiny are, I think, gathering to a focus. Incomprehensible men! Wrapped up in meditations of a kind which I cannot divine, they pass me by unnoticed. Concealment is utter folly on my part, for the people will not see. It was but just now that I passed directly before the eyes of the mate ; it was no long while ago that I ventured into the captain's own private cabin, and took thence the materials with which I write, and have written. I shall from time to time continue this journal. It is true that I may not find an opportunity of transmitting it to the world, but I will not fail to make the endeavor.

At the last moment I will enclose the MS. in a bottle, and cast it within the sea.

An incident has occurred which has given me new room for meditation. Are such things the operation of ungoverned chance? I had ventured upon deck and thrown myself down, without attracting any notice, among a pile of ratlin-stuff and old sails, in the bottom of the yawl. While musing upon the singularity of my fate, I unwittingly daubed with a tar-brush the edges of a neatly-folded studding-sail which lay near me on a barrel. The studding-sail is now bent upon the ship, and the thoughtless touches of the brush are spread out into the word Discovery.

I have made many observations lately upon the structure of the vessel. Although well armed, she is not, I think, a ship of war. Her rigging, build, and general equipment, all negative a supposition of this kind. What she is not, I can easily perceive; what she $i s$, I fear it is impossible to say. I know not how it is, but in scrutinizing her strange model and singular cast of spars, her huge size and overgrown suits of canvas, her severely simple bow and antiquated stern, there will occasionally flash across my mind a sensation of familiar things, and there is always mixed up with such indistinct shadows of recollection an unaccountable memory of old foreign chronicles and ages long ago.

I have been looking at the timbers of the ship. She is built of a material to which I am a stranger. There is a peculiar character about the wood which strikes me as rendering it unfit for the purpose to which it has been applied. I mean its extreme porous-
ness, considered independently of the worm-eaten condition which is a consequence of navigation in these seas, and apart from the rottenness attendant upon age. It will appear perhaps an observation somewhat over-curious, but this wood would have every characteristic of Spanish oak, if Spanish oak were distended by any unnatural means.

In reading the above sentence, a curious apothegm of an old weather-beaten Dutch navigator comes full upon my recollection. "It is as sure," he was wont to say, when any doubt was entertained of his veracity, "as sure as there is a sea where the ship itself will grow in bulk like the living body of the seaman."

About an hour ago, I made bold to thrust myself among a group of the crew. They paid me no manner of attention, and, although I stood in the very midst of them all, seemed utterly unconscious of my presence. Like the one I had at first seen in the hold, they all bore about them the marks of a hoary old age. Their knees trembled with infirmity; their shoulders were bent double with decrepitude; their shrivelled skins rattled in the wind; their voices were low, tremulous, and broken; their eyes glistened with the rheum of years; and their gray hairs streamed terribly in the tempest. Around them, on every part of the deck, lay scattered mathematical instruments of the most quaint and obsolete construction.

I mentioned, some time ago, the bending of a studding-sail. From that period, the ship, being thrown dead off the wind, has continued her terrific course due south, with every rag of canvas packed upon her, from her truck to her lower studding-sail
booms, and rolling every moment her top-gallant yardarms into the most appalling hell of water which it can enter into the mind of man to imagine. I have just left the deck, where I find it impossible to maintain a footing, although the crew seem to experience little inconvenience. It appears to me a miracle of miracles that our enormous bulk is not swallowed up at once and forever. We are surely doomed to hover continually upon the brink of eternity, without taking a final plunge into the abyss. From billows a thousand times more stupendous than any I have ever seen, we glide away with the facility of the arrowy sea-gull; and the colossal waters rear their heads above us like demons of the deep, but like demons confined to simple threats, and forbidden to destroy. I am led to attribute these frequent escapes to the only natural cause which can account for such effect. I must suppose the ship to be within the influence of some strong current, or impetuous under-tow.

I have seen the captain face to face, and in his own cabin - but, as I expected, he paid me no attention. Although in his appearance there is, to a casual observer, nothing which might bespeak him more or less than man, still, a feeling of irrepressible reverence and awe mingled with the sensation of wonder with which I regarded him. In stature, he is nearly my own height; that is, about five feet eight inches. He is of a well-knit and compact frame of body, neither robust nor remarkably otherwise. But it is the singularity of the expression which reigns upon the face it is the intense, the wonderful, the thrilling evidence of old age so utter, so extreme, which excites within my spirit a sense - a sentiment ineffable. His fore-
head, although little wrinkled, seems to bear upon it the stamp of a myriad of years. His gray hairs are records of the past, and his grayer eyes are Sibyls of the future. The cabin floor was thickly strewn with strange, iron-clasped folios, and mouldering instruments of science, and obsolete long-forgotten charts. His head was bowed down upon his hands, and he pored, with a fiery, unquiet eye, over a paper which I took to be a commission, and which at all events bore the signature of a monarch. He muttered to himself - as did the first seaman whom I saw in the hold some low peevish syllables of a foreign tongue; and, although the speaker was close at my elbow, his voice seemed to reach my ears from the distance of a mile.

The ship and all in it are imbued with the spirit of Eld. The crew glide to and fro like the ghosts of buried centuries; their eyes have an eager and uneasy meaning ; and when their figures fall athwart my path, in the wild glare of the battle-lanterns, I feel as I have never felt before, although I have been all my life a dealer in antiquities, and have imbibed the shadows of fallen columns at Balbec, and Tadmor, and Persepolis, until my very soul has become a ruin.

When I look around me, I feel ashamed of my former apprehensions. If I trembled at the blast which has hitherto attended us, shall I not stand aghast at a warring of wind and ocean, to convey any idea of which the words tornado and simoon are trivial and ineffective? All in the immediate vicinity of the ship is the blackness of eternal night, and a chaos of foamless water; but, about a league
on either side of us, may be seen, indistinctly and at intervals, stupendous ramparts of ice, towering away into the desolate sky, and looking like the walls of the universe.

As I imagined, the ship proves to be in a current - if that appellation can properly be given to a tide which, howling and shrieking by the white ice, thunders on to the southward with a velocity like the headlong dashing of a cataract.

To conceive the horror of my sensations is, I presume, utterly impossible; yet a curiosity to penetrate the mysteries of these awful regions predominates even over my despair, and will reconcile me to the most hideous aspect of death. It is evident that we are hurrying onwards to some exciting knowledge some never-to-be-imparted secret, whose attainment is destruction. Perhaps this current leads us to the southern pole itself. It must be confessed that a supposition apparently so wild has every probability in its favor.

The crew pace the deck with unquiet and tremulous step; but there is upon their countenances an expression more of the eagerness of hope than of the apathy of despair.

In the mean time the wind is still in our poop, and, as we carry a crowd of canvas, the ship is at times lifted bodily from out the sea! Oh, horror upon horror! - the ice opens suddenly to the right, and to the left, and we are whirling dizzily, in immense concentric circles, round and round the borders of a gigantic amphitheatre, the summit of whose walls is lost in

## TALES OF PSEUDO-SCIENCE

the darkness and the distance. But little time will be left me to ponder upon my destiny! The circles rapidly grow small - we are plunging madly within the grasp of the whirlpool - and amid a roaring, and bellowing, and thundering of ocean and tempest, the ship is quivering - oh God! and ——going down!

Note. - The " MS. Found in a Bottle" was originally published in 1831, and it was not until many years afterwards that I became acquainted with the maps of Mercator, in which the ocean is represented as rushing, by four mouths, into the (northern) Polar Gulf, to be absorbed into the bowels of the earth ; the Pole itself being represented by a black rock, towering to a prodigious height.

## DESCENT INTO THE MAELSTRÖM


#### Abstract

The ways of God in Nature, as in Providence, are not as our ways ; nor are the models that we frame any way commensurate to the vastness, profundity, and unsearchableness of His works, which have a depth in them greater than the well of Democritus.

Joseph Glanville.


ME had now reached the summit of the loftiest crag. For some minutes the old man seemed too much exhausted to speak.
"Not long ago," said he at length, "and I could have guided you on this route as well as the youngest of my sons; but, about three years past, there happened to me an event such as never happened before to mortal man - or at least such as no man ever survived to tell of - and the six hours of deadly terror which I then endured have broken me up body and soul. You suppose me a very old man - but I am not. It took less than a single day to change these hairs from a jetty black to white, to weaken my limbs, and to unstring my nerves, so that I tremble at the least exertion, and am frightened at a shadow. Do you know I can scarcely look over this little cliff without getting giddy?"

The " little cliff," upon whose edge he had so carelessly thrown himself down to rest that the weightier portion of his body hung over it, while he was only kept from falling by the tenure of his elbow on its
extreme and slippery edge - this "little cliff" arose, a sheer unobstructed precipice of black shining rock, some fifteen or sixteen hundred feet from the world of crags beneath us. Nothing would have tempted me to within half a dozen yards of its brink. In truth so deeply was I excited by the perilous position of my companion, that I fell at full length upon the ground, clung to the shrubs around me, and dared not even glance upward at the sky - while I struggled in vain to divest myself of the idea that the very foundations of the mountain were in danger from the fury of the winds. It was long before I could reason myself into sufficient courage to sit up and look out into the distance.
"You must get over these fancies," said the guide, "for I have brought you here that you might have the best possible view of the scene of that event I mentioned - and to tell you the whole story with the spot just under your eye.
"We are now," he continued, in that particularizing manner which distinguished him - " we are now close upon the Norwegian coast -- in the sixty-eighth degree of latitude - in the great province of Nordland - and in the dreary district of Lofoden. The mountain upon whose top we sit is Helseggen, the Cloudy. Now raise yourself up a little higher - hold on to the grass if you feel giddy - so - and look out, beyond the belt of vapor beneath us, into the sea."

I looked dizzily, and beheld a wide expanse of ocean, whose waters wore so inky a hue as to bring at once to my mind the Nubian geographer's account of the Mare Tenebrarum. A panorama more deplorably desclate no human imagination can conceive. To the right and left, as far as the eye could reach, there lay
outstretched, like ramparts of the world, lines of horridly black and beetling cliff, whose character of gloom was but the more forcibly illustrated by the surf which reared high up against it its white and ghastly crest, howling and shrieking forever. Just opposite the promontory upon whose apex we were placed, and at a distance of some five or six miles out at sea, there was visible a small, bleak-looking island; or, more properly, its position was discernible through the wilderness of surge in which it was enveloped. About two miles nearer the land arose another of smaller size, hideously craggy and barren, and encompassed at various intervals by a cluster of dark rocks.

The appearance of the ocean, in the space between the more distant island and the shore, had something very unusual about it. Although, at the time, so strong a gale was blowing landward that a brig in the remote offing lay to under a double-reefed trysail, and constantly plunged her whole hull out of sight, still there was here nothing like a regular swell, but only a short, quick, angry cross dashing of water in every direction - as well in the teeth of the wind as otherwise. Of foam there was little except in the immediate vicinity of the rocks.
"The island in the distance," resumed the old man, "is called by the Norwegians Vurrgh. The one midway is Moskoe. That a mile to the northward is Ambaaren. Yonder are Iflesen, Hoeyholm, Kieldholm, Suarven, and Buckholm. Farther off - between Moskoe and Vurrgh - are Otterholm, Flimen, Sandflesen, and Skarholm. These are the true names of the places - but why it has been thought necessary to name them at all is more than either you or I can
understand. Do you hear anything? Do you see any change in the water?"

We had now been about ten minutes upon the top of Helseggen, to which we had ascended from the interior of Lofoden, so that we had caught no glimpse of the sea until it had burst upon us from the summit. As the old man spoke, I became aware of a loud and gradually increasing sound, like the moaning of a vast herd of buffaloes upon an American prairie ; and at the same moment I perceived that what seamen term the chopping character of the ocean beneath us, was rapidly changing into a current which set to the eastward. Even while I gazed, this current acquired a monstrous velocity. Each moment added to its speed - to its headlong impetuosity. In five minutes the whole sea, as far as Vurrgh, was lashed into ungovernable fury; but it was between Moskoe and the coast that the main uproar held its sway. Here the vast bed of the waters, seamed and scarred into a thousand conflicting channels, burst suddenly into frenzied convulsion - heaving, boiling, hissing - gyrating in gigantic and innumerable vortices, and all whirling and plunging on to the eastward with a rapidity which water never elsewhere assumes, except in precipitous descents.

In a few minutes more, there came over the scene another radical alteration. The general surface grew somewhat more smooth, and the whirlpools, one by one, disappeared, while prodigious streaks of foam became apparent where none had been seen before. These streaks, at length, spreading out to a great distance, and entering into combination, took unto themselves the gyratory motion of the subsided vortices, and seemed to form the germ of another more vast.

Suddenly - very suddenly - this assumed a distinct and definite existence, in a circle of more than a mile in diameter. The edge of the whirl was represented by a broad belt of gleaming spray ; but no particle of this slipped into the mouth of the terrific funnel, whose interior, as far as the eye could fathom it, was a smooth, shining, and jet-black wall of water, inclined to the horizon at an angle of some forty-five degrees, speeding dizzily round and round with a swaying and sweltering motion, and sending forth to the winds an appalling voice, half shriek, half roar, such as not even the mighty cataract of Niagara ever lifts up in its agony to Heaven.

The mountain trembled to its very base, and the rock rocked. I threw myself upon my face, and clung to the scant herbage in an excess of nervous agitation.
"This," said I at length, to the old man - "this can be nothing else than the great whirlpool of the Maelström."
"So it is sometimes termed," said he. "We Norwegians call it the Moskoe-ström, from the island of Moskoe in the midway."

The ordinary accounts of this vortex had by no means prepared me for what I saw. That of Jonas Ramus, which is perhaps the most circumstantial of any, cannot impart the faintest conception either of the magnificence or of the horror of the scene - or of the wild bewildering sense of the novel which confounds the beholder. I am not sure from what point of view the writer in question surveyed it, nor at what time; but it could neither have been from the summit of Helseggen, nor during a storm. There are some passages of his description, nevertheless, which may

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be quoted for their details, although their effect is exceedingly feeble in conveying an impression of the spectacle.
"Between Lofoden and Moskoe," he says, "the depth of the water is between thirty-six and forty fathoms; but on the other side, toward Ver (Vurrgh), this depth decreases so as not to afford a convenient passage for a vessel, without the risk of splitting on the rocks, which happens even in the calmest weather. When it is flood, the stream runs up the country between Lofoden and Moskoe with a boisterous rapidity; but the roar of its impetuous ebb to the sea is scarce equalled by the loudest and most dreadful cataracts, the noise being heard several leagues off; and the vortices or pits are of such an extent and depth, that if a ship comes within its attraction, it is inevitably absorbed and carried down to the bottom, and there beat to pieces against the rocks; and when the water relaxes, the fragments thereof are thrown up again. But these intervals of tranquillity are only at the turn of the ebb and flood, and in calm weather, and last but a quarter of an hour, its violence gradually returning. When the stream is most boisterous, and its fury heightened by a storm, it is dangerous to come within a Norway mile of it. Boats, yachts, and ships have been carried away by not guarding against it before they were within its reach. It likewise happens frequently that whales come too near the stream, and are overpowered by its violence; and then it is impossible to describe their howlings and bellowings in their fruitless struggles to disengage themselves. A bear once, attempting to swim from Lofoden to Moskoe, was caught by the stream and borne down, while he roared terribly, so as to be
heard on shore. Large stocks of firs and pine trees, after being absorbed by the current, rise again broken and torn to such a degree as if bristles grew upon them. This plainly shows the bottom to consist of craggy rocks, among which they are whirled to and fro. This stream is regulated by the flux and reflux of the sea - it being constantly high and low water every six hours. In the year 1645, early in the morning of Sexagesima Sunday, it raged with such noise and impetuosity that the very stones of the houses on the coast fell to the ground."

In regard to the depth of the water, I could not see how this could have been ascertained at all in the immediate vicinity of the vortex. The "forty fathoms" must have reference only to portions of the channel close upon the shore either of Moskoe or Lofoden. The depth in the centre of the Moskoeström must be immeasurably greater; and no better proof of this fact is necessary than can be obtained from even the sidelong glance into the abyss of the whirl which may be had from the highest crag of Helseggen. Looking down from this pinnacle upon the howling Phlegethon below, I could not help smiling at the simplicity with which the honest Jonas Ramus records, as a matter difficult of belief, the anecdotes of the whales and the bears; for it appeared to me, in fact, a self-evident thing that the largest ships of the line in existence, coming within the influence of that deadly attraction, could resist it as little as a feather the hurricane, and must disappear bodily and at once.

The attempts to account for the phenomenon some of which, I remember, seemed to me sufficiently plausible in perusal - now wore a very different and
unsatisfactory aspect. The idea generally received is that this, as well as three smaller vortices among the Feroe Islands, "have no other cause than the collision of waves rising and falling, at flux and reflux, against a ridge of rocks and shelves, which confines the water so that it precipitates itself like a cataract; and thus the higher the flood rises, the deeper must the fall be, and the natural result of all is a whirlpool or vortex, the prodigious suction of which is sufficiently known by lesser experiments." - These are the words of the "Encyclopædia Britannica." Kircher and others imagine that in the centre of the channel of the Maelström is an abyss penetrating the globe, and issuing in some very remote part - the Gulf of Bothnia being somewhat decidedly named in one instance. This opinion, idle in itself, was the one to which, as I gazed, my imagination most readily assented ; and, mentioning it to the guide, I was rather surprised to hear him say that, although it was the view almost universally entertained of the subject by the Norwegians, it nevertheless was not his own. As to the former notion he confessed his inability to comprehend it; and here I agreed with him - for, however conclusive on paper, it becomes altogether unintelligible, and even absurd, amid the thunder of the abyss.
"You have had a good look at the whirl now," said the old man, "and if you will creep round this crag, so as to get in its lee, and deaden the roar of the water, I will tell you a story that will convince you I ought to know something of the Moskoe-ström."

I placed myself as desired, and he proceeded.
"Myself and my two brothers once owned a schoonerrigged smack of about seventy tons burden, with which we were in the habit of fishing among the islands be-

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yond Moskoe, nearly to Vurrgh. In ali violent eddies at sea there is good fishing, at proper opportunities, if one has only the courage to attempt it; but among the whole of the Lofoden coastmen we three were the only ones who made a regular business of going out to the islands, as I tell you. The usual grounds are a great way lower down to the southward. There fish can be got at all hours, without much risk, and therefore these places are preferred. The choice spots over here among the rocks, however, not only yield the finest variety, but in far greater abundance; so that we often got in a single day what the more timid of the craft could not scrape together in a week. In fact, we made it a matter of desperate speculation the risk of life standing instead of labor, and courage answering for capital.
"We kept the smack in a cove about five miles higher up the coast than this; and it was our practice, in fine weather, to take advantage of the fifteen minutes' slack to push across the main channel of the Moskoe-ström, far above the pool, and then drop down upon anchorage somewhere near Otterholm, or Sandflesen, where the eddies are not so violent as elsewhere. Here we used to remain until nearly time for slack-water again, when we weighed and made for home. We never set out upon this expedition without a steady side wind for going and coming - one that we felt sure would not fail us before our return - and we seldom made a miscalculation upon this point. Twice, during six years, we were forced to stay all night at anchor on account of a dead calm, which is a rare thing indeed just about here; and once we had to remain on the grounds nearly a week, starving to death, owing to a gale which blew up
shortly after our arrival, and made the channel too boisterous to be thought of. Upon this occasion we should have been driven out to sea in spite of everything (for the whirlpools threw us round and round so violently, that, at length, we fouled our anchor and dragged it) if it had not been that we drifted into one of the innumerable cross currents - here to-day and gone to-morrow - which drove us under the lee of Flimen, where, by good luck, we brought up.
"I could not tell you the twentieth part of the difficulties we encountered 'on the ground' - it is a bad spot to be in, even in good weather - but we made shift always to run the gauntlet of the Moskoe-ström itself without accident; although at times my heart has been in my mouth when we happened to be a minute or so behind or before the slack. The wind sometimes was not as strong as we thought it at starting, and then we made rather less way than we could wish, while the current rendered the smack unmanageable. My eldest brother had a son eighteen years old, and I had two stout boys of my own. These would have been of great assistance at such times, in using the sweeps, as well as afterward in fishing but, somehow, although we ran the risk ourselves, we had not the heart to let the young ones get into the danger - for, after all said and done, it was a horrible danger, and that is the truth.
" It is now within a few days of three years since what I am going to tell you occurred. It was on the tenth of July, I8-, a day which the people of this part of the world will never forget - for it was one in which blew the most terrible hurricane that ever came out of the heavens. And yet all the morning, and indeed until late in the afternoon, there was a gentle
and steady breeze from the south-west, while the sun shone brightly, so that the oldest seaman among us could not have foreseen what was to follow.
" The three of us - my two brothers and myself had crossed over to the islands about two o'clock P. M., and soon nearly loaded the smack with fine fish, which, we all remarked, were more plenty that day than we had ever known them. It was just seven, by my watch, when we weighed and started for home, so as to make the worst of the Ström at slack water, which we knew would be at eight.
"We set out with a fresh wind on our starboard quarter, and for some time spanked along at a great rate, never dreaming of danger, for indeed we saw not the slightest reason to apprehend it. All at once we were taken aback by a breeze from over Helseggen. This was most unusual - something that had never happened to us before - and I began to feel a little uneasy, without exactly knowing why. We put the boat on the wind, but could make no headway at all for the eddies, and I was upon the point of proposing to return to the anchorage, when, looking astern, we saw the whole horizon covered with a singular copper-colored cloud that rose with the most amazing velocity.
"In the mean time the breeze that had headed us off fell away, and we were dead becalmed, drifting about in every direction. This state of things, however, did not last long enough to give us time to think about it. In less than a minute the storm was upon us - in less than two the sky was entirely overcast and what with this and the driving spray, it became suddenly so dark that we could not see each other in the smack.
"Such a hurricane as then blew it is folly to attempt describing. The oldest seaman in Norway never experienced anything like it. We had let our sails go by the run before it cleverly took us; but, at the first puff, both our masts went by the board as if they had been sawed off - the mainmast taking with it my youngest brother, who had lashed himself to it for safety.
"Our boat was the lightest feather of a thing that ever sat upon water. It had a complete flush deck, with only a small hatch near the bow, and this hatch it had always been our custom to batten down when about to cross the Ström, by way of precaution against the chopping seas. But for this circumstance we should have foundered at once - for we lay entirely buried for some moments. How my elder brother escaped destruction I cannot say, for I never had an opportunity of ascertaining. For my part, as soon as I had let the foresail run, I threw myself flat on deck, with my feet against the narrow gunwale of the bow, and with my hands grasping a ring. bolt near the foot of the foremast. It was mere instinct that prompted me to do this - which was undoubtedly the very best thing I could have done for I was too much flurried to think.
"For some moments we were completely deluged, as I say, and all this time I held my breath, and clung to the bolt. When I could stand it no longer I raised myself upon my knees, still keeping hold with my hands, and thus got my head clear. Presently our little boat gave herself a shake, just as a dog does in coming out of the water, and thus rid herself, in some measure, of the seas. I was now trying to get the better of the stupor that had come
over me, and to collect my senses so as to see what was to be done, when I felt somebody grasp my arm. It was my elder brother, and my heart leaped for joy, for I had made sure that he was overboard -but the next moment all this joy was turned into horror - for he put his mouth close to my ear, and screamed out the word 'Moskoe-ström!'
" No one ever will know what my feelings were at that moment. I shook from head to foot as if I had had the most violent fit of the ague. I knew what he meant by that one word well enough - I knew what he wished to make me understand. With the wind that now drove us on, we were bound for the whirl of the Ström, and nothing could save us!
"You perceive that in crossing the Ström channel, we always went a long way up above the whirl, even in the calmest weather, and then had to wait and watch carefully for the slack - but now we were driving right upon the pool itself, and in such a hurricane as this! 'To be sure,' I thought, 'we shall get there just about the slack--there is some little hope in that' - but in the next moment I cursed myself for being so great a fool as to dream of hope at all. I knew very well that we were doomed, had we been ten times a ninety-gun ship.
"By this time the first fury of the tempest had spent itself, or perhaps we did not feel it so much as we scudded before it; but at all events the seas, which at first had been kept down by the wind, and lay flat and frothing, now got up into absolute mountains. A singular change, too, had come over the heavens. Around in every direction it was still as black as pitch, but nearly overhead there burst out, all at once, a circular rift of clear sky - as clear as I
ever saw - and of a deep bright blue - and through it there blazed forth the full moon with a lustre that I never before knew her to wear. She lit up everything about us with the greatest distinctness-but, oh God, what a scene it was to light up!
"I now made one or two attempts to speak to my brother - but, in some manner which I could not understand, the din had so increased that I could not make him hear a single word, although I screamed at the top of my voice in his ear. Presently he shook his head, looking as pale as death, and held up one of his fingers, as if to say listen!
"At first I could not make out what he meant but soon a hideous thought flashed upon me. I dragged my watch from its fob. It was not going. I glanced at its face by the moonlight, and then burst into tears as I flung it far away into the ocean. It had run down at seven o'clock! We were behind the time of the slack, and the whirl of the Ström was in full fury!
"When a boat is well built, properly trimmed, and not deep laden, the waves in a strong gale, when she is going large, seem always to slip from beneath her - which appears very strange to a landsman - and this is what is called riding, in sea phrase.
"Well, so far we had ridden the swells very cleverly; but presently a gigantic sea happened to take us right under the counter, and bore us with it as it rose - up-up -as if into the sky. I would not have believed that any wave could rise so high. And then down we came with a sweep, a slide, and a plunge, that made me feel sick and dizzy, as if I was falling from some lofty mountain-top in a dream. But while we were up I had thrown a quick glance
around - and that one glance was all sufficient. I saw our exact position in an instant. The Moskoeström whirlpool was about a quarter of a mile dead ahead - but no more like the every-day Moskoe-ström, than the whirl as you now see it is like a mill-race. If I had not known where we were, and what we had to expect, I should not have recognized the place at all. As it was, I involuntarily closed my eyes in horror. The lids clenched themselves together as if in a spasm.
"It could not have been more than two minutes afterwards until we suddenly felt the waves subside, and were enveloped in foam. The boat made a sharp half turn to larboard, and then shot off in its new direction like a thunderbolt. At the same moment the roaring noise of the watcr was completely drowned in a kind of shrill shriek - such a sound as you might imagine given out by the water-pipes of many thousand steam-vessels, letting off their steam all together. We were now in the belt of surf that always surrounds the whirl; and I thought, of course, that another moment would plunge us into the abyss - down which we could only see indistinctly on account of the amazing velocity with which we were borne along. The boat did not seem to sink into the water at all, but to skim like an air-bubble upon the surface of the surge. Her starboard side was next the whirl, and on the larboard arose the world of ocean we had left. It stood like a huge writhing wall between us and the horizon.
"It may appear strange, but now, when we were in the very jaws of the gulf, I felt more composed than when we were only approaching it. Having made up my mind to hope no more, I got rid of a great deal of 251
that terror which unmanned me at first. I suppose it was despair that strung my nerves.
"It may look like boasting - but what I tell you is truth - I began to reflect how magnificent a thing it was to die in such a manner, and how foolish it was in me to think of so paltry a consideration as my own individual life, in view of so wonderful a manifestation of God's power. I do believe that I blushed with shame when this idea crossed my mind. After a little while I became possessed with the keenest curiosity about the whirl itself. I positively felt a wish to explore its depths, even at the sacrifice I was going to make; and my principal grief was that I should never be able to tell my old companions on shore about the mysteries I should see. These, no doubt, were singular fancies to occupy a man's mind in such extremity - and I have often thought, since, that the revolutions of the boat around the pool might have rendered me a little light-headed.
"There was another circumstance which tended to restore my self-possession; and this was the cessation of the wind, which could not reach us in our present situation - for, as you saw yourself, the belt of surf is considerably lower than the general bed of the ocean, and this latter now towered above us, a high, black, mountainous ridge. If you have never been at sea in a heavy gale, you can form no idea of the confusion of mind occasioned by the wind and spray together. They blind, deafen, and strangle you, and take away all power of action or reflection. But we were now, in a great measure, rid of these annoyances - just as death-condemned felons in prison are allowed petty indulgences, forbidden them while their doom is yet uncertain.

## A DESCENT INTO THE MAELSTRÖM

"How often we made the circuit of the belt it is impossible to say. We careered round and round for perhaps an hour, flying rather than floating, getting gradually more and more into the middle of the surge, and then nearer and nearer to its horrible inner edge. All this time I had never let go of the ring-bolt. My brother was at the stern, holding on to a small empty water-cask which had been securely lashed under the coop of the counter, and was the only thing on deck that had not been swept overboard when the gale first took us. As we approached the brink of the pit he let go his hold upon this, and made for the ring, from which, in the agony of his terror, he endeavored to force my hands, as it was not large enough to afford us both a secure grasp. I never felt deeper grief than when I saw him attempt this act - although I knew he was a madman when he did it - a raving maniac through sheer fright. I did not care, however, to contest the point with him. I knew it could make no difference whether either of us held on at all; so I let him have the bolt, and went astern to the cask. This there was no great difficulty in doing; for the smack flew round steadily enough, and upon an even keel - only swaying to and fro, with the immense sweeps and swelters of the whirl. Scarcely had I secured myself in my new position, when we gave a wild lurch to starboard, and rushed headlong into the abyss. I muttered a hurried prayer to God, and thought all was over.
"As I felt the sickening sweep of the descent, I had instinctively tightened my hold upon the barrel, and closed my eyes. For some seconds I dared not open them - while I expected instant destruction, and wondered that I was not already in my death-struggles
with the water. But moment after moment elapsed. I still lived. The sense of falling had ceased; and the motion of the vessel seemed much as it had been before, while in the belt of foam, with the exception that she now lay more along. I took courage and looked once again upon the scene.
" Never shall I forget the sensations of awe, horror, and admiration with which I gazed about me. The boat appeared to be hanging, as if by magic, midway down, upon the interior surface of a funnel vast in circumference, prodigious in depth, and whose perfectly smooth sides might have been mistaken for ebony, but for the bewildering rapidity with which they spun around, and for the gleaming and ghastly radiance they shot forth, as the rays of the full moon, from that circular rift amid the clouds, which I have already described, streamed in a flood of golden glory along the black walls, and far away down into the inmost recesses of the abyss.
"At first I was too much confused to observe anything accurately. The general burst of terrific grandeur was all that I beheld. When I recovered myself a little, however, my gaze fell instinctively downward. In this direction I was able to obtain an unobstructed view, from the manner in which the smack hung on the inclined surface of the pool. She was quite upon an even keel-that is to say, her deck lay in a plane parallel with that of the water - but this latter sloped at an angle of more than forty-five degrees, so that we seemed to be lying upon our beam-ends. I could not help observing, nevertheless, that I had scarcely more difficulty in maintaining my hold and footing in this situation, than if we had been upon a dead
level; and this, I suppose, was owing to the speed at which we revolved.
"The rays of the moon seemed to search the very bottom of the profound gulf; but still I could make out nothing distinctly, on account of a thick mist in which everything there was enveloped, and over which there hung a magnificent rainbow, like that narrow and tottering bridge which Mussulmans say is the only pathway between Time and Eternity. This mist, or spray, was no doubt occasioned by the clashing of the great walls of the funnel, as they all met together at the bottom - but the yell that went up to the Heavens from out of that mist, I dare not attempt to describe.
"Our first slide into the abyss itself, from the belt of foam above, had carried us to a great distance down the slope; but our farther descent was by no means proportionate. Round and round we swept - not with any uniform movement but in dizzying swings and jerks, that sent us sometimes only a few hundred yards - sometimes nearly the complete circuit of the whirl. Our progress downward, at each revolution, was slow, but very perceptible.
"Looking about me upon the wide waste of liquid ebony on which we were thus borne, I perceived that our boat was not the only object in the embrace of the whirl. Both above and below us were visible fragments of vessels, large masses of building timber and trunks of trees, with many smaller articles, such as pieces of house furniture, broken boxes, barrels, and staves. I have already described the unnatural curiosity which had taken the place of my original terrors. It appeared to grow upon me as I drew nearer and nearer to my dreadful doom. I now began
to watch, with a strange interest, the numerous things that floated in our company. I must have been delirious-for I even sought amusement in speculating upon the relative velocities of their several descents toward the foam below. 'This fir tree,' I found myself at one time saying, 'will certainly be the next thing that takes the awful plunge and disappears,' - and then I was disappointed to find that the wreck of a Dutch merchant ship overtook it and went down before. At length, after making several guesses of this nature, and being deceived in all - this fact - the fact of my invariable miscalculation, set me upon a train of reflection that made my limbs again tremble, and my heart beat heavily once more.
"It was not a new terror that thus affected me, but the dawn of a more exciting hope. This hope arose partly from memory, and partly from present observation. I called to mind the great variety of buoyant matter that strewed the coast of Lofoden, having been absorbed and then thrown forth by the Moskoeström. By far the greater number of the articles were shattered in the most extraordinary way - so chafed and roughened as to have the appearance of being stuck full of splinters - but then I distinctly recollected that there were some of them which were not disfigured at all. Now I could not account for this difference except by supposing that the roughened fragments were the only ones which had been completely absorbed - that the others had entered the whirl at so late a period of the tide, or, from some reason, had descended so slowly after entering, that they did not reach the bottom before the turn of the flood came, or of the ebb, as the case might be. I
conceived it possible, in either instance, that they might thus be whirled up again to the level of the ocean, without undergoing the fate of those which had been drawn in more early or absorbed more rapidly. I made, also, three important observations. The first was, that as a general rule, the larger the bodies were, the more rapid their descent ; the second, that, between two masses of equal extent, the one spherical, and the other of any other shape, the superiority in speed of descent was with the sphere; the third, that, between two masses of equal size, the one cylindrical, and the other of any other shape, the cylinder was absorbed the more slowly. Since my escape, I have had several conversations on this subject with an old school-master of the district; and it was from him that I learned the use of the words 'cylinder' and 'sphere.' He explained to me although I have forgotten the explanation - how what I observed was, in fact, the natural consequence of the forms of the floating fragments, and showed me how it happened that a cylinder, swimming in a vortex, offered more resistance to its suction, and was drawn in with greater difficulty, than an equally bulky body, of any form whatever. ${ }^{1}$
"There was one startling circumstance which went a great way in enforcing these observations, and rendering me anxious to turn them to account, and this was that, at every revolution, we passed something like a barrel, or else the yard or the mast of a vessel, while many of these things, which had been on our level when I first opened my eyes upon the wonders of the whirlpool, were now high up above us,

[^9]and seemed to have moved but little from their original station.
"I no longer hesitated what to do. I resolved to lash myself securely to the water cask upon which I now held, to cut it loose from the counter, anid to throw myself with it into the water. I attracted my brother's attention by signs, pointed to the floating barrels that came near us, and did everything in my power to make him understand what I was about to do. I thought at length that he comprehended my design - but, whether this was the case or not, he shook his head despairingly, and refused to move from his station by the ring-bolt. It was impossible to reach him; the emergency admitted of no delay; and so, with a bitter struggle, I resigned him to his fate, fastened myself to the cask by means of the lashings which secured it to the counter, and precipitated myself with it into the sea, without another moment's hesitation.
"The result was precisely what I had hoped it might be. As it is myself who now tell you this tale - as you see that I did escape - and as you are already in possession of the mode in which this escape was effected, and must therefore anticipate all that I have farther to say - I will bring my story quickly to conclusion. It might have been an hour, or thereabout, after my quitting the smack, when, having descended to a vast distance beneath me, it made three or four wild gyrations in rapid succession, and, bearing my loved brother with it, plunged headlong, at once and forever, into the chaos of foam below. The barrel to which I was attached sunk very little farther than half the distance between the bottom of the gulf and the spot at which I leaped
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overboard, before a great change took place in the character of the whirlpool. The slope of the sides of the vast funnel became momently less and less steep. The gyrations of the whirl grew, gradually, less and less violent. By degrees, the froth and the rainbow disappeared, and the bottom of the gulf seemed slowly to uprise. The sky was clear, the winds had gone down, and the full moon was setting radiantly in the west, when I found myself on the surface of the ocean, in full view of the shores of Lofoden, and above the spot where the pool of the Moskoe-ström had been. It was the hour of the slack, but the sea still heaved in mountainous waves from the effects of the hurricane. I was borne violently into the channel of the Ström, and in a few minutes was hurried down the coast into the 'grounds' of the fishermen. A boat picked me up-exhausted from fatigue - and (now that the danger was removed) speechless from the memory of its horror. Those who drew me on board were my old mates and daily companions, but they knew me no more than they would have known a traveller from the spirit-land. My hair, which had been raven-black the day before, was as white as you see it now. They say too that the whole expression of my countenance had changed. I told them my story - they did not believe it. I now tell it to you - and I can scarcely expect you to put more faith in it than did the merry fishermen of Lofoden."

## THE

# THOUSAND-AND-SECOND TALE OF SCHEHERAZADE 

Truth is stranger than fiction.
Old Saying.
Having had occasion lately, in the course of some Oriental investigations, to consult the Tellmenow Isitsoörnot, a work which (like the Zohar of Simeon Jochaides) is scarcely known at all, even in Europe, and which has never been quoted, to my knowledge, by any American - if we except, perhaps, the author of the "Curiosities of American Literature ;" having had occasion, I say, to turn over some pages of the first-mentioned very remarkable work, I was not a little astonished to discover that the literary world has hitherto been strangely in error respecting the fate of the vizier's daughter, Scheherazade, as that fate is depicted in the "Arabian Nights;" and that the dénouement there given, if not altogether inaccurate, as far as it goes, is at least to blame in not having gone very much farther.

For full information on this interesting topic, I must refer the inquisitive reader to the Isitsoörnot itself; but, in the mean time, I shall be pardoned for giving a summary of what I there discovered.

It will be remembered that, in the usual version of the tales, a certain monarch, having good cause to be 260
jealous of his queen, not only puts her to death, but makes a vow, by his beard and the prophet, to espouse each night the most beautiful maiden in his dominions, and the next morning to deliver her up to the executioner.

Having fulfilled this vow for many years to the letter, and with a religious punctuality and method that conferred great credit upon him as a man of devout feelings and excellent sense, he was interrupted one afternoon (no doubt at his prayers) by a visit from his grand vizier, to whose daughter, it appears, there had occurred an idea.

Her name was Scheherazade, and her idea was, that she would either redeem the land from the depopulating tax upon its beauty, or perish, after the approved fashion of all heroines, in the attempt.

Accordingly, and although we do not find it to be leap-year (which makes the sacrifice more meritorious), she deputes her father, the grand vizier, to make an offer to the king of her hand. This hand the king eagerly accepts - (he had intended to take it at all events, and had put off the matter from day to day, only through fear of the vizier) - but, in accepting it now, he gives all parties very distinctly to understand that, grand vizier or no grand vizier, he has not the slightest design of giving up one iota of his vow or of his privileges. When, therefore, the fair Scheherazade insisted upon marrying the king, and did actually marry him despite her father's excellent advice not to do anything of the kind - when she would and did marry him, I say, will-I nill-I, it was with her beautiful black eyes as thoroughly open as the nature of the case would allow.

It seems, however, that this politic damsel (who had 261
been reading Machiavelli, beyond doubt) had a very ingenious little plot in her mind. On the night of the wedding she contrived, upon I forget what specious pretence, to have her sister occupy a couch sufficiently near that of the royal pair to admit of easy conversation from bed to bed; and, a little before cock-crowing, she took care to awaken the good monarch, her husband (who bore her none the worse will because he intended to wring her neck on the morrow) - she managed to awaken him, I say (although on account of a capital conscience and an easy digestion, he slept well), by the profound interest of a story (about a rat and a black cat, I think) which she was narrating (all in an under-tone, of course) to her sister. When the day broke, it so happened that this history was not altogether finished, and that Scheherazade, in the nature of things, could not finish it just then, since it was high time for her to get up and be bowstrung - a thing very little more pleasant than hanging, only a trifle more genteel.

The king's curiosity, however, prevailing, I am sorry to say, even over his sound religious principles, induced him for this once to postpone the fulfilment of his vow until next morning, for the purpose and with the hope of hearing that night how it fared in the end with the black cat (a black cat, I think it was) and the rat.

The night having arrived, however, the Lady Scheherazade not only put the finishing stroke to the black cat and the rat (the rat was blue), but before she well knew what she was about found herself deep in the intricacies of a narration, having reference (if I am not altogether mistaken) to a pink horse (with green wings) that went, in a violet manner, by clockwork, and was
wound up with an indigo key. With this history the king was even more profoundly interested than with the other - and, as the day broke before its conclusion (notwithstanding all the queen's endeavors to get through with it in time for the bowstringing), there was again no resource but to postpone that ceremony as before, for twenty-four hours. The next night there happened a similar accident with a similar result; and then the next - and then again the next; so that, in the end, the good monarch, having been unavoidably deprived of all opportunity to keep his vow during a period of no less than one thousand and one nights, either forgets it altogether by the expiration of this time, or gets himself absolved of it in the regular way, or (what is more probable) breaks it outright, as well as the head of his father confessor. At all events, Scheherazade, who, being lineally descended from Eve, fell heir perhaps to the whole seven baskets of talk which the latter lady, we all know, picked up from under the trees in the garden of Eden; Scheherazade, I say, finally triumphed, and the tariff upon beauty was repealed.

Now, this conclusion (which is that of the story as we have it upon record) is, no doubt, excessively proper and pleasant - but, alas ! like a great many pleasant things, is more pleasant than true; and I am indebted altogether to the Isitsoörnot for the means of correcting the error. "Le mieux," says a French proverb, "est l'ennemi du bien," and, in mentioning that Scheherazade had inherited the seven baskets of talk, I should have added that she put them out at compound interest until they amounted to seventy-seven.
"My dear sister," said she, on the thousand-and-
second night (I quote the language of the Isitsoörnot, at this point, verbatim), "my dear sister," said she, "now that all this little difficulty adout the bowstring has blown over, and that this odious tax is so happily repealed, I feel that I have been guilty of great indiscretion in withholding from you and the king (who, I am sorry to say, snores - a thing no gentleman would do) the full conclusion of the history of Sinbad the sailor. This person went through numerous other and more interesting adventures than those which I related; but the truth is, I felt sleepy on the particular night of their narration, and so was seduced into cutting them short - a grievous piece of misconduct, for which I only trust that Allah will forgive me. But even yet it is not too late to remedy my great neglect - and as soon as I have given the king a pinch or two in order to wake him up so far that he may stop making that horrible noise, I will forthwith entertain you (and him if he pleases) with the sequel of this very remarkable story."

Hereupon the sister of Scheherazade, as I have it from the Isitsoörnot, expressed no very particular intensity of gratification, but the king, having been sufficiently pinched, at length ceased snoring, and finally said "Hum!" and then "Hoo!" when the queen understanding these words (which are no doubt Arabic) to signify that he was all attention, and would do his best not to snore any more - the queen, I say, having arranged these matters to her satisfaction, re-entered thus, at once, into the history of Sinbad the sailor:-
"At length, in my old age" (these are the words of Sinbad himself, as retailed by Scheherazade)-"at length, in my old age, and after enjoying many 264
years of tranquillity at home, I became once more possessed with a desire of visiting foreign countries; and one day, without acquainting any of my family with my design, I packed up some bundles of such merchandise as was most precious and least bulky, and, engaging a porter to carry them, went with him down to the sea-shore, to wait the arrival of any chance vessel that might convey me out of the kingdom into some region which I had not as yet explored.
"Having deposited the packages upon the sands, we sat down beneath some trees, and looked out into the ocean in the hope of perceiving a ship, but during several hours we saw none whatever. At length I fancied that I could hear a singular buzzing or humming sound - and the porter, after listening awhile, declared that he also could distinguish it. Presently it grew louder, and then still louder, so that we could have no doubt that the object which caused it was approaching us. At length, on the edge of the horizon, we discovered a black speck, which rapidly increased in size until we made it out to be a vast monster, swimming with a great part of its body above the surface of the sea. It came towards us with inconceivable swiftness, throwing up huge waves of foam around its breast, and illuminating all that part of the sea through which it passed, with a long line of fire that extended far off into the distance.
"As the thing drew near we saw it very distinctly. Its length was equal to that of three of the loftiest trees that grow, and it was as wide as the great hall of audience in your palace, $O$ most sublime and munificent of the caliphs. Its body, which was unlike that of ordinary fishes, was as solid as a rock, and of a jetty blackness throughout all that portion of it which
floated above the water, with the exception of a narrow blood-red streak that completely begirdled it. The belly, which floated beneath the surface, and of which we could get only a glimpse now and then as the monster rose and fell with the billows, was entirely covered with metallic scales, of a color like that of the moon in misty weather. The back was flat and nearly white, and from it there extended upwards six spines, about half the length of the whole body.
"This horrible creature had no mouth that we could perceive; but, as if to make up for this deficiency, it was provided with at least four score of eyes, that protruded from their sockets like those of the green dragon-fly, and were arranged all around the body in two rows, one above the other, and parallel to the blood-red streak, which seemed to answer the purpose of an eyebrow. Two or three of these dreadful eyes were much larger than the others, and had the appearance of solid gold.
"Although this beast approached us, as I have before said, with the greatest rapidity, it must have been moved altogether by necromancy; for it had neither fins like a fish nor web-feet like a duck, nor wings like the sea-shell which is blown along in the manner of a vessel; nor yet did it writhe itself forward as do the eels. Its head and its tail were shaped precisely alike, only, not far from the latter, were two small holes that served for nostrils, and through which the monster puffed out its thick breath with prodigious violence, and with a shrieking, disagreeable noise.
" Our terror at beholding this hideous thing was very great, but it was even surpassed by our astonishment when, upon getting a nearer look, we perceived 266
upon the creature's back a vast number of animals about the size and shape of men, and altogether much resembling them, except that they wore no garments (as men do), being supplied (by nature, no doubt) with an ugly uncomfortable covering, a great deal like cloth, but fitting so tight to the skin as to render the poor wretches laughably awkward, and put them apparently to severe pain. On the very tips of their heads were certain square-looking boxes, which, at first sight, I thought might have been intended to answer as turbans, but I soon discovered that they were excessively heavy and solid, and I therefore concluded they were contrivances designed, by their great weight, to keep the heads of the animals steady and safe upon their shoulders. Around the necks of the creatures were fastened black collars (badges of servitude, no doubt) such as we keep on our dogs, only much wider and infinitely stiffer - so that it was quite impossible for these poor victims to move their heads in any direction without moving the body at the same time ; and thus they were doomed to perpetual contemplation of their noses - a view puggish and snubby in a wonderful if not positively in an awful degree.
"When the monster had nearly reached the shore where we stood, it suddenly pushed out one of its eyes to a great extent, and emitted from it a terrible flash of fire, accompanied by a dense cloud of smoke, and a noise that I can compare to nothing but thunder. As the smoke cleared away, we saw one of the odd man-animals standing near the head of the large beast with a trumpet in his hand, through which (putting it to his mouth) he presently addressed us in loud, harsh, and disagreeable accents, that perhaps
we should have mistaken for language, had they not come altogether through the nose.
"Being thus evidently spoken to, I was at a loss how to reply, as I could in no manner understand what was said; and in this difficulty I turned to the porter, who was near swooning through affright, and demanded of him his opinion as to what species of monster it was, what it wanted, and what kind of creatures those were that so swarmed upon its back. To this the porter replied, as well as he could for trepidation, that he had once before heard of this seabeast; that it was a cruel demon, with bowels of sulphur and blood of fire, created by evil genii as the means of inflicting misery upon mankind; that the things upon its back were vermin, such as sometimes infest cats and dogs, only a little larger and more savage; and that these vermin had their uses, however evil - for, through the torture they caused the beast by their nibblings and stingings, it was goaded into that degree of wrath which was requisite to make it roar and commit ill, and so fulfil the vengeful and malicious designs of the wicked genii.
"This account determined me to take to my heels, and, without once even looking behind me, I ran at full speed up into the hills, while the porter ran equally fast, although nearly in an opposite direction, so that, by these means, he finally made his escape with my bundles, of which I have no doubt he took excellent care - although this is a point I cannot determine, as I do not remember that I ever beheld him again.
" For myself, I was so hotly pursued by a swarm of the men-vermin (who had come to the shore in boats) that I was very soon overtaken, bound hand and foot,
and conveyed to the beast, which immediately swam out again into the middle of the sea.
" I now bitterly repented my folly in quitting a comfortable home to peril my life in such adventures as this; but regret being useless, I made the best of my condition, and exerted myself to secure the goodwill of the man-animal that owned the trumpet, and that appeared to exercise authority over its fellows. I succeeded so well in this endeavor that, in a few days, the creature bestowed upon me various tokens of its favor, and in the end even went to the trouble of teaching me the rudiments of what it was vain enough to denominate its language; so that, at length, I was enabled to converse with it readily, and came to make it comprehend the ardent desire I had of seeing the world.
"' Washish squashish squeak, Sinbad, hey-didale diddle, grunt unt grumble, hiss, fiss, whiss,' said he to me, one day after dinner - but I beg a thousand pardons, I had forgotten that your majesty is not conversant with the dialect of the Cock-neighs (so the man-animals were called; I presume because their language formed the connecting link between that of the horse and that of the rooster). With your permission, I will translate. 'Washish squashish,' and so forth: - that is to say, 'I am happy to find, my dear Sinbad, that you are really a very excellent fellow; we are now about doing a thing which is called circumnavigating the globe; and since you are so desirous of seeing the world, I will strain a point and give you a free passage upon the back of the beast.' "

When the Lady Scheherazade had proceeded thus far, relates the Isitsoörnot, the king turned over from his left side to his right, and said:
"It is, in fact, very surprising, my dear queen, that you omitted, hitherto, these latter adventures of Sinbad. Do you know I think them exceedingly entertaining and strange?"

The king having thus expressed himself, we are told, the fair Scheherazade resumed her history in the following words:
"Sinbad went on in this manner with his narrative - 'I thanked the man-animal for its kindness, and soon found myself very much at home on the beast, which swam at a prodigious rate through the ocean; although the surface of the latter is, in that part of the world, by no means flat, but round like a pomegranate, so that we went - so to say - either up hill or down hill all the time.'"
"That, I think, was very singular," interrupted the king.
"Nevertheless, it is quite true," replied Scheherazade.
"I have my doubts," rejoined the king; "but, pray, be so good as to go on with the story."
"I will," said the queen. "'The beast,' continued Sinbad, 'swam, as I have related, up hill and down hill, until at length we arrived at an island, many hundreds of rniles in circumference, but which, nevertheless, had been built in the middle of the sea by a colony of little things like caterpillars.' " ${ }^{1}$
"Hum!" said the king.
"' Leaving this island,' said Sinbad" - (for Scheherazade, it must be understood, took no notice of her husband's ill-mannered ejaculation) - "'leaving this island, we came to another where the forests were

[^10]of solid stone, and so hard that they shivered to pieces the finest-tempered axes with which we endeavored to cut them down.' " ${ }^{1}$
"Hum!" said the king, again; but Scheherazade, paying him no attention, continued in the language of Sinbad: -
"' Passing beyond this last island, we reached a country where there was a cave that ran to the dis-
${ }^{1}$ One of the most remarkable natural curiosities in Texas is a petrified forest, near the head of Pasigono River. It consists of several hundred trees, in an erect position, all turned to stone. Some trees, now growing, are partly petrified. This is a startling fact for natural philosophers, and must cause them to modify the existing theory of petrifaction. - See William Kennedy : Tcxas, i. p. 120.

This account, at first discredited, has since been corroborated by the discovery of a completely petrified forest, near the head waters of the Cheyenne, or Chienne River, which has its source in the Black Hills of the Rocky chain.
" There is scarcely, perhaps, a spectacle on the surface of the globe more remarkable, either in a geological or picturesque point of view, than that presented by the petrified forest, near Cairo. The traveller, having passed the tombs of the caliphs, just beyond the gates of the city, proceeds to the southward, nearly at right angles to the road across the desert to Suez, and after having travelled some ten miles up a low barren valley, covered with sand, gravel, and sea shells, fresh as if the tide had retired but yesterday, crosses a low range of sandhills, which has for some distance run parallel to his path. The scene now presented to him is beyond conception singula: and desolate. A mass of fragments of trees, all converted into stone, and, when struck by his horse's hoof, ringing like cast-iron, is seen to extend itself for miles and miles around him, in the form of a decayed and prostrate forest. The wood is of a dark brown hue, but retains its form in perfection, the pieces being from one to fifteen feet in length, and from half a foot to three feet in thickness, strewed so closely together, as far as the eye can reach, that an Egyptian donkey can scarcely thread its way through amongst them, and so natural that, were it in Scotland
tance of thirty or forty miles within the bowels of the earth, and that contained a greater number of far more spacious and more magnificent palaces than are to be found in all Damascus and Bagdad. From the roofs of these palaces there hung myriads of gems, like diamonds, but larger than men; and in among the streets of towers and pyramids and temples, there flowed immense rivers as black as ebony, and swarming with fish that had no eyes.' ${ }^{11}$
"Hum!" said the king.
"' We then swam into a region of the sea where we found a lofty mountain, down whose sides there streamed torrents of melted metal, some of which were twelve miles wide and sixty miles long, ${ }^{2}$ while from an abyss on the summit issued so vast a quantity of ashes that the sun was entirely blotted out from the heavens, and it became darker than the darkest midnight; so that, when we were even at the distance of a hundred and fifty miles from the mountain, it was impossible to see the whitest object, however close we held it to our eyes.' " ${ }^{3}$
or Ireland, it might pass without remark for some enormous drained bog, on which the exhumed trees lay rotting in the sun. The roots and rudiments of the branches are, in many cases, nearly perfect, and in some the worm-holes eaten under the bark are readily recognizable. The most delicate of the sap vessels, and all the finer portions of the centre of the wood, are perfectly entire, and bear to be examined with the strongest magnifiers. The whole are so thoroughly silicified as to scratch glass and be capable of receiving the highest polish." - Asiatic fournal, iii. p. 359 (Third Series).

1 The Mammoth Cave of Kentucky. 2 In Iceland, 1783.
8 " During the eruption of Hecla, in 1766 , clouds of this kind produced such a degree of darkness that, at Glaumba, which is more than fifty leagues distant from the mountain, people could only find their way by groping. During the eruption of Vesuvius, in 1794,
"Hum!" said the king.
"' After quitting this coast, the beast continued his voyage until we met with a land in which the nature of things seemed reversed - for we here saw a great lake, at the bottom of which, more than a hundred feet beneath the surface of the water, there flourished in full leaf a forest of tall and luxuriant trees.' " ${ }^{1}$
"Hoo!" said the king.
"'Some hundred miles farther on brought us to a climate where the atmosphere was so dense as to sustain ron or steel, just as our own does feathers.' " 2
"Fiddle de dee," said the king.
"' Proceeding still in the same direction, we presently arrived at the most magnificent region in the whole world. Through it there meandered a glorious river for several thousands of miles. This river was of unspeakable depth and of a transparency richer than that of amber. It was from three to six miles in
at Caserta, four leagues distant, people could only walk by the light of torches On the first of May, $\mathbf{1 8 1 2}$, a cloud of volcanic ashes and sand, coming from a volcano in the island of St. Vincent, covered the whole of Barbadoes, spreading over it so intense a darkness that, at midday, in the open air, one could not perceive the trees or other objects near him, or even a white handkerchief placed at the distance of six inches from the eye." - Hugr Murray: Encyclopadia of Geography, i. p. 215 .

1 "In the year 1790, in the Caraccas, during an earthquake, a portion of the granite soil sunk and left a lake eight hundred yards in diameter, and from eighty to a hundred feet deep. It was a part of the forest of Aripao which sunk, and the trees remained green for several months under the water." - Hugh Murray: loc. cit., i. p. 22 I.

2 The hardest steel ever manufactured may, under the action of a blow-pipe, be reduced to an impalpable powder which will float readily in the atmospheric air.
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width; and its banks, which arose on either side to twelve hundred feet in perpendicular height, were crowned with ever-blossoming trees, and perpetual sweet-scented flowers, that made the whole territory one gorgeous garden; but the name of this luxuriant land was the kingdom of Horror, and to enter it was inevitable death.' ${ }^{1}$
"Humph!" said the king.
"، We left this kingdom in great haste, and, after some days, came to another, where we were astonished to perceive myriads of monstrous animals with horns resembling scythes upon their heads. These hideous beasts dig for themselves vast caverns in the soil, of a funnel shape, and line the sides of them with rocks, so disposed one upon the other that they fall instantly, when trodden upon by other animals, thus precipitating them into the monsters' dens, where their blood is immediately sucked, and their carcasses afterwards hurled contemptuously out to an immense distance from "the caverns of death."'" ${ }^{2}$
"Pooh!" said the king.
"' Continuing our progress, we perceived a district abounding with vegetables that grew not upon any soil, but in the air. ${ }^{3}$ There were others that sprang

[^11]from the substance of other vegetables; ${ }^{1}$ others that derived their sustenance from the bodies of living animals; ${ }^{2}$ and then again, there were others that glowed all over with intense fire; ${ }^{3}$ others that moved from place to place at pleasure; ${ }^{4}$ and what is still more wonderful, we discovered flowers that lived and breathed and moved their limbs at will, and had, moreover, the detestable passion of mankind for enslaving other creatures, and confining them in horrid and solitary prisons until the fulfilment of appointed tasks.' ${ }^{\prime \prime} 5$

1 The Parasites, such as the wonderful Raffesia Arnoldi.
2 Schouw advocates a class of plants that grow upon living animals - the Planta Epizoa. Of this class are the Fuci and Alga.

Mr. J. B. Williams of Salem, Mass., presented the National Institute with an insect from New Zealand, with the following description: - " The Hotte,' a decided caterpillar, or worm, is found growing at the foot of the Rata tree, with a plant growing out of its head. This most peculiar and most extraordinary insect travels up both the Rata and Puriri trees, and entering into the top, eats its way, perforating the trunk of the tree until it reaches the root; it then comes out of the root, and dies, or remains dormant, and the plant propagates out of its head; the body remains perfect and entire, of a harder substance than when alive. From this insect the natives make a coloring for tattooing."
${ }^{3}$ In mines and natural caves we find a species of cryptogamous fungus that emits an intense phosphorescence.
${ }_{4}$ The Orchis, Scabious, and Vallisneria.
5 "The corolla of this flower (Aristolochia Clematitis), which is tubular, but terminating upwards in a ligulate limb, is inflated into a globular figure at the base. The tubular part is internally beset with stiff hairs, pointing downwards. The globular part contains the pistil, which consists merely of a germen and stigma, together with the surrounding stamens. But the stamens, being shorter than even the germen, cannot discharge the pollen so as to throw it upon the stigma, as the flower stands always upright till after impregnation. And hence, without some additional and peculiar
"Pshaw!" said the king.
"" Quitting this land, we soon arrived at another in which the bees and the birds are mathematicians of such genius and erudition that they give daily instructions in the science of geometry to the wise men of the empire. The king of the place having offered a reward for the solution of two very difficult problems, they were solved upon the spot - the one by the bees, and the other by the birds; but the king keeping their solution a secret, it was only after the most profound researches and labor, and the writing of an infinity of big books, during a long series of years, that the menmathematicians at length arrived at the identical solutions which had been given upon the spot by the bees and by the birds. ${ }^{1}{ }^{1}$
aid, the pollen must necessarily fall down to the bottom of the flower. Now, the aid that nature has furnished in this case, is that of the Tipula Pennicornis, a small insect, which, entering the tube of the corolla in quest of honey, descends to the bottom, and rummages about till it becomes quite covered with pollen; but, not being able to force its way out again, owing to the downward position of the hairs, which converge to a point like the wires of a mouse-trap, and being somewhat impatient of its confinement, it brushes backwards and forwards, trying every corner, till, after repeatedly traversing the stigma, it covers it with pollen sufficient for its impregnation, in consequence of which the flower soon begins to droop, and the hairs to shrink to the side of the tube, effecting an easy passage for the escape of the insect." - Rev. P. Keith : System of Physiological Botany.

1 The bees - ever since bees were - have been constructing their cells with just such sides, in just such number, and at just such inclinations, as, it has been demonstrated (in a problem involving the profoundest mathematical principles), are the very sides, in the very number, and at the very angles, which will afford the creatures the most room that is compatible with the greatest stability of structure.

During the latter part of the last century, the question arose
"Oh my!" said the king.
" 'We had scarcely lost sight of this empire when we found ourselves close upon another, from whose shores there flew over our heads a flock of fowls, a mile in breadth, and two hundred and forty miles long; so that, although they flew a mile during every minute, it required no less than four hours for the whole flock to pass over us - in which there were several millions of millions of fowls." " 1
"Oh fy!" said the king.
"' No sooner had we got rid of these birds, which occasioned us great annoyance, than we were terrified by the appearance of a fowl of another kind, and infinitely larger than even the rocs which I met in my former voyages; for it was bigger than the biggest of the domes on your seraglio, O most Munificent of Caliphs. This terrible fowl had no head that we could perceive, but was fashioned entirely of belly, which was of a prodigious fatness and roundness, of a
among mathernaticians - "to determine the best form that can be given to the sails of a windmill, according to their varying distances from the revolving vanes, and likewise from the centres of the revolution." This is an excessively complex problem; for it is, in other words, to find the best possible position at an infinity of varied distances, and at an infinity of points on the arm. There were a thousand futile attempts to answer the query on the part of the most illustrious mathematicians; and when, at length, an undeniable solution was discovered, men found that the wings of a bird had given it with absolute precision ever since the first bird had traversed the air.
${ }^{1}$ He observed a flock of pigeons passing betwixt Frankfort and the Indiana territory, one mile at least in breadth; it took up four hours in passing ; which, at the rate of one mile per minute, gives a length of 240 miles; and, supposing three pigeons to each square yard, gives $2,230,272,000$ pigeons. - Travels in Canada and the United States, by Lieut. F. Hall.
soft-looking substance, smooth, shining, and striped with various colors. In its talons, the monster was bearing away, to his eyrie in the heavens, a house from which it had knocked off the roof, and in the interior of which we distinctly saw human beings, who, beyond doubt, were in a state of frightful despair at the horrible fate which awaited them. We shouted with all our might, in the hope of frightening the bird into letting go of its prey; but it merely gave a snort or puff, as if of rage, and then let fall upon our heads a heavy sack which proved to be filled with sand!'"
"Stuff!" said the king.
"'It was just after this adventure that we encountered a continent of immense extent and of prodigious solidity, but which, nevertheless, was supported entirely upon the back of a sky-blue cow that had no fewer than four hundred horns.'" 1
"That, now, I believe," said the king, "because I have read something of the kind before, in a book."
"'We passed immediately beneath this continent (swimming in between the legs of the cow), and, after some hours, found ourselves in a wonderful country indeed, which, I was informed by the man-animal, was his own native land, inhabited by things of his own species. This elevated the man-animal very much in my esteem; and in fact, I now began to feel ashamed of the contemptuous familiarity with which I had treated him; for I found that the man-animals in general were a nation of the most powerful magicians, who lived with worms in their brain, ${ }^{2}$ which, no

[^12]doult, served to stimulate them by their painful writhings and wrigglings to the most miraculous efforts of imagination.'"
" Nonsense !" said the king.
"' Among the magicians were domesticated several animals of very singular kinds; for example, there was a huge horse whose bones were iron and whose blood was boiling water. In place of corn, he had black stones for his usual food; and yet, in spite of so hard a diet, he was so strong and swift that he would drag a load more weighty than the grandest temple in this city, at a rate surpassing that of the flight of most birds.'" ${ }^{1}$
"Twattle!" said the king.
"'I saw, also, among these people, a hen without feathers, but bigger than a camel; instead of flesh and bone she had iron and brick; her blood, like that of the horse (to whom, in fact, she was nearly related), was boilng water; and like him, she ate nothing but wood or black stones. This hen brought forth, very frequently, a hundred chickens in the day; and, after birth, they took up their residence for several weeks within the stomach of their mother.' ${ }^{2}{ }^{2}$
"Fal lal!" said the king.
"' One of this nation of mighty conjurers created a man out of brass and wood and leather, and endowed him with such ingenuity that he would have beaten at chess all the race of mankind with the exception of the great Caliph, Haroun Alraschid. ${ }^{3}$ Another of

1 On the Great Western Railway, between London and Exeter, a speed of 71 miles per hour has been attained. A train weighing 90 tons was whirled from Paddington to Didcot ( 53 miles) in 51 minutes.

2 The Eccaleobion.
8 Maelzel's Automaton Chess-player.
these magi constructed (of like material) a creature that put to shame even the genius of him who made it ; for so great were its reasoning powers that, in a second, it performed calculations of so vast an extent that they would have required the united labor of fifty thousand fleshy men for a year. ${ }^{1}$ But a still more wonderful conjurer fashioned for himself a mighty thing that was neither man nor beast, but which had brains of lead, intermixed with a black matter like pitch, and fingers that it employed with such incredible speed and dexterity that it would have had no trouble in writing out twenty thousand copies of the Koran in an hour; and this with so exquisite a precision that in all the copies there should not be found one to vary from another by the breadth of the finest hair. This thing was of prodigious strength, so that it erected or overthrew the mightiest empires at a breath; but its powers were exercised equally for evil and for good.'"
" Ridiculous !" said the king.
"'Among this nation of necromancers there was also one who had in his veins the blood of the salamanders; for he made no scruple of sitting down to smoke his chibouk in a red-hot oven until his dinner was thoroughly roasted upon its floor. ${ }^{2}$ Another had the faculty of converting the common metals into gold, without even looking at them during the process. ${ }^{8}$ Another had such a delicacy of touch that he made a wire so fine as to be invisible. ${ }^{4}$ Another had such

[^13]quickness of perception that he counted all the separate motions of an elastic body, while it was springing backwards and forwards at the rate of nine hundred millions of times in a second.' " ${ }^{1}$
"Absurd!" said the king.
"، Another of these magicians, by means of a fluid that nobody ever yet saw, could make the corpses of his friends brandish their arms, kick out their legs, fight, or even get up and dance at his will. ${ }^{2}$ Another had cultivated his voice to so great an extent that he could have made himself heard from one end of the earth to the other. ${ }^{3}$ Another had so long an arm that he could sit down in Damascus and indite a letter at Bagdad - or indeed at any distance whatsoever. ${ }^{4}$ Another commanded the lightning to come down to him out of the heavens, and it came at his call; and served him for a plaything when it came. Another took two loud sounds and out of them made a silence. Another constructed a deep darkness out of two brilliant lights. ${ }^{5}$ Another made ice in a red-

[^14]hot furnace. ${ }^{1}$ Another directed the sun to paint his portrait, and the sun did. ${ }^{2}$ Another took this luminary with the moon and the planets, and, having first weighed them with scrupulous accuracy, probed into their depths and found out the solidity of the substance of which they are made. But the whole nation is, indeed, of so surprising a necromantic ability, that not even their infants, nor their commonest cats and dogs, have any difficulty in seeing objects that do not exist at all, or that for twenty millions of years before the birth of the nation itself had been blotted out from the face of creation.' ${ }^{3}$
of an inch; and with all other rays the results are the same - the difference varying with a uniform increase from the violet to the red.

Analogous experiments in respect to sound produce analogous results.

1 Place a platina crucible over a spirit lamp, and keep it at a red heat ; pour in some sulphuric acid, which, though the most volatile of bodies at a common temperature, will be found to become completely fixed in a hot crucible, and not a drop evaporates; being surrounded by an atmosphere of its own, it does not, in fact, touch the sides. A few drops of water are now introduced, when the acid, immediately coming in contact with the heated sides of the crucible, flies off in sulphurous acid vapor, and so rapid is its progress that the caloric of the water passes off with it, which falls a lump of ice to the bottom; by taking advantage of the moment before it is allowed to re-melt, it may be turned out a lump of ice from a red-hot vessel.

2 The Daguerreotype.
3 Although light travels 167,000 miles in a second, the distance of 6I Cygni (the only star whose distance is ascertained) is so inconceivably great that its rays would require more than ten years to reach the earth. For stars beyond this, 20 - or even 1,000 years would be a moderate estimate. Thus, if they had been annihilated 20 , or 1,000 , years ago, we might still see them to-day, by the light which started from their surfaces 20 , or 1,000 , years in
"Preposterous!" said the king.
"' The wives and daughters of these incomparably great and wise magi,'" continued Scheherazade, without being in any manner disturbed by these frequent and most ungentlemanly interruptions on the part of her husband - "'the wives and daughters of these eminent conjurers are everything that is accomplished and refined; and would be everything that is interesting and beautiful, but for an unhappy fatality that besets them, and from which not even the miraculous powers of their husbands and fathers has, hitherto, been adequate to save. Some fatalities come in certain shapes, and some in others - but this of which I speak has come in the shape of a crotchet.'"
"A what?" said the king.
"' A crotchet,'" said Scheherazade. "'One of the evil genii, who are perpetually upon the watch to inflict ill, has put it into the heads of these accomplished ladies that the thing which we describe as personal beauty consists altogether in the protuberance of the region which lies not very far below the small of the back. Perfection of loveliness, they say, is in the direct ratio of the extent of this hump. Having been long possessed of this idea, and bolsters being cheap in that country, the days have long gone by since it was possible to distinguish a woman from a dromedary __'"
"Stop!" said the king - "I can't stand that, and
the past time. That many which we see daily are really extinct, is not impossible - not even improbable.

The elder Herschel maintains that the light of the faintest nebulæ seen through his great telescope must have taken $3,000,000$ years in reaching the earth. Some, made visible by Lord Ross's instrument, must, then, have required at least $20,000,000$.

I won't. You have already given me a dreadful headache with your lies. The day, too, I perceive, is beginning to break. How long have we been married ? - my conscience is getting to be troublesome again. And then that dromedary touch - do you take me for a fool? Upon the whole, you might as well get up and be throttled."

These words, as I learn from the Isitsoörnot, both grieved and astonished Scheherazade; but, as she knew the king to be a man of scrupulous integrity, and quite unlikely to forfeit his word, she submitted to her fate with a good grace. She derived, however, great consolation (during the tightening of the bowstring) from the reflection that much of the history remained still untold, and that the petulance of her brute of a husband had reaped for him a most righteous reward, in depriving him of many inconceivable adventures.

## SOME WORDS WITH A MUMMY

THE symposium of the preceding evening had been a little too much for my nerves. I had a wretched headache, and was desperately drowsy. Instead of going out, therefore, to spend the evening, as I had proposed, it occurred to me that I could not do a wiser thing than just eat a mouthful of supper and go immediately to bed.

A light supper, of course. I am exceedingly fond of Welsh rabbit. More than a pound at once, however, may not at all times be advisable. Still, there can be no material objection to two. And really, between two and three there is merely a single unit of difference. I ventured, perhaps, upon four. My wife will have it five; but, clearly, she has confounded two very distinct affairs. The abstract number, five, I am willing to admit; but, concretely, it has reference to bottles of Brown Stout, without which, in the way of condiment, Welsh rabbit is to be eschewed.

Having thus concluded a frugal meal, and donned my nightcap, with the serene hope of enjoying it till noon the next day, I placed my head upon the pillow, and, through the aid of a capital conscience, fell into a profound slumber forthwith.

But when were the hopes of humanity fulfilled? I could not have completed my third snore when 285
there came a furious ringing at the street-door bell, and then an impatient thumping at the knocker, which awakened me at once. In a minute afterward, and while I was still rubbing my eyes, my wife thrust in my face a note from my old friend, Doctor Ponnonner. It ran thus:-
"Come to me, by all means, my dear good friend, as soon as you receive this. Come and help us to rejoice. At last, by long persevering diplomacy, I have gained the assent of the Directors of the City Museum to my examination of the Mummy - you know the one I mean. I have permission to unswathe it and open it, if desirable. A few friends only will be present - you, of course. The Mummy is now at my house, and we shall begin to unroll it at eleven to-night.

> " Yours ever,

> " Ponnonner."

By the time I had reached the "Ponnonner," it struck me that I was as wide awake as a man need be. I leaped out of bed in an ecstasy, overthrowing all in my way; dressed myself with a rapidity truly marvellous; and set off, at the top of my speed, for the Doctor's.

There I found a very eager company assembled. They had been awaiting me with much impatience; the Mummy was extended upon the dining-table; and, the moment I entered, its examination was commenced.

It was one of a pair brought, several years previously, by Captain Arthur Sabretash, a cousin of Ponnonner's, from a tomb near Eleithias, in the Lybian Mountains, a considerable distance above Thebes on the Nile. The grottos at this point, although less magnificent than the Theban sepulchres, are of higher
interest, on account of affording more numerous illustrations of the private life of the Egyptians. The chamber from which our specimen was taken was said to be very rich in such illustrations - the walls being completely covered with fresco paintings and bas-reliefs, while statues, vases, and mosaic work of rich patterns, indicated the vast wealth of the deceased.

The treasure had been deposited in the Museum precisely in the same condition in which Captain Sabretash had found it: that is to say, the coffin had not been disturbed. For eight years it had thus stood, subject only externally to public inspection. We had now, therefore, the complete Mummy at our disposal; and, to those who are aware how very rarely the unransacked antique reaches our shores, it will be evident, at once, that we had great reason to congratulate ourselves upon our good fortune.

Approaching the table, I saw on it a large box, or case, nearly seven feet long, and perhaps three feet wide, by two feet and a half deep. It was oblong not coffin-shaped. The material was at first supposed to be the wood of the sycamore (platanus), but, upon cutting into it, we found it to be pasteboard, or, more properly, papier maché, composed of papyrus. It was thickly ornamented with paintings representing funeral scenes, and other mournful subjects - interspersed among which, in every variety of position, were certain series of hieroglyphical characters, intended, no doubt, for the name of the departed. By good luck, Mr. Gliddon formed one of our party; and he had no difficulty in translating the letters, which were simply phonetic, and represented the word, Allamistakeo.

We had some difficulty in getting this case open
without injury; but, having at length accomplished the task, we came to a second, coffin-shaped, and very considerably less in size than the exterior one, but resembling it precisely in every other respect. The interval between the two was filled with resin, which had in some degree defaced the colors of the interior box.

Upon opening this latter (which we did quite easily), we arrived at a third case, also coffin-shaped, and varying from the second one in no particular, except in that of its material, which was cedar, and still emitted the peculiar and highly aromatic odor of that wood. Between the second and the third case there was no interval - the one fitting accurately within the other.

Removing the third case, we discovered and took out the body itself. We had expected to find it, as usual, enveloped in frequent rolls, or bandages, of linen; but, in place of these, we found a sort of sheath, made of papyrus, and coated with a layer of plaster, thickly gilt and painted. The paintings represented subjects connected with the various supposed duties of the soul, and its presentation to different divinities, with numerous identical human figures, intended very probably as portraits of the persons embalmed. Extending from head to foot was a columnar, or perpendicular inscription, in phonetic hieroglyphics, giving again his name and titles, and the names and titles of his relations.

Around the neck thus unsheathed was a collar of cylindrical glass beads, diverse in color, and so arranged as to form images of deities, of the scarabæus, etc., with the winged globe. Around the small of the waist was a similar collar or belt.

Stripping off the papyrus, we found the flesh in excellent preservation, with no perceptible odor. The color was reddish. The skin was hard, smooth, and glossy. The teeth and hair were in good condition. The eyes (it seemed) had been removed, and glass ones substituted, which were very beautiful and wonderfully life-like, with the exception of somewhat too determined a stare. The fingers and the nails were brilliantly gilded.

Mr. Gliddon was of opinion, from the redness of the epidermis, that the embalmment had been effected altogether by asphaltum; but on scraping the surface with a steel instrument, and throwing into the fire some of the powder thus obtained, the flavor of camphor and other sweet-scented gums became apparent.

We searched the corpse very carefully for the usual openings through which the entrails are extracted, but, to our surprise, we could discover none. No member of the party was at that period aware that entire or unopened mummies are not unfrequently met. The brain it was customary to withdraw through the nose; the intestines through an incision in the side; the body was then shaved, washed, and salted; then laid aside for several weeks, when the operation of embalming, properly so called, began.

As no trace of an opening could be found, Doctor Ponnonner was preparing his instruments for dissection, when I observed that it was then past two o'clock. Hereupon it was agreed to postpone the internal examination until the next evening; and we were about to separate for the present, when some one suggested an experiment or two with the Voltaic pile.

The application of electricity to a mummy, three or vol. II. - I9 289
four thousand years old at the least, was an idea, if not very sage, still sufficiently original, and we all caught it at once. About one-tenth in earnest and nine-tenths in jest, we arranged a battery in the Doctor's study, and conveyed thither the Egyptian.

It was only after much trouble that we succeeded in laying bare some portions of the temporal muscle which appeared of less stony rigidity than other parts of the frame, but which, as we had anticipated, of course gave no indication of galvanic susceptibility when brought in contact with the wire. This, the first trial indeed, seemed decisive, and, with a hearty laugh at our own absurdity, we were bidding each other good-night, when my eyes, happening to fall upon those of the Mummy, were there immediately riveted in amazement. My brief glance, in fact, had sufficed to assure me that the orbs which we had all supposed to be glass, and which were originally noticeable for a certain wild stare, were now so far covered by the lids, that only a small portion of the tunica albuginea remained visible.

With a shout I called attention to the fact, and it became immediately obvious to all.

I cannot say that I was alarmed at the phenomenon, because "alarmed" is, in my case, not exactly the word. It is possible, however, that, but for the Brown Stout, I might have been a little nervous. As for the rest of the company, they really made no attempt at concealing the downright fright which possessed them. Doctor Ponnonner was a man to be pitied. Mr. Gliddon, by some peculiar process, rendered himself invisible. Mr. Silk Buckingham, I fancy, will scarcely be so bold as to deny that he made his way, upon all fours, under the table.

After the first shock of astonishment, however, we resolved, as a matter of course, upon farther experiment forthwith. Our operations were now directed against the great toe of the right foot. We made an incision over the outside of the exterior os sesamoideum pollicis pedis, and thus got at the root of the abductor muscle. Readjusting the battery, we now applied the fluid to the bisected nerves - when, with a movement of exceeding life-likeness, the Mummy first drew up its right knee so as to bring it nearly in contact with the abdomen, and then, straightening the limb with inconceivable force, bestowed a kick upon Doctor Ponnonner, which had the effect of discharging that gentleman, like an arrow from a catapult, through a window into the street below.

We rushed out en masse to bring in the mangled remains of the victim, but had the happiness to meet him upon the staircase, coming up in an unaccountable hurry, brimful of the most ardent philosophy, and more than ever impressed with the necessity of prosecuting our experiments with rigor and with zeal.

It was by his advice, accordingly, that we made, upon the spot, a profound incision into the tip of the subject's nose, while the Doctor himself, laying violent hands upon it, pulled it into vehement contact with the wire.

Morally and physically - figuratively and literally - was the effect electric. In the first place, the corpse opened its eyes and winked very rapidly for several minutes, as does Mr. Barnes in the pantomime; in the second place, it sneezed; in the third, it sat upon end; in the fourth, it shook its fist in Doctor Ponnonner's face; in the fifth, turning to Messieurs Gliddon and

Buckingham, it addressed them, in very capital Egyptian, thus :
"I must say, gentlemen, that I am as much surprised as I am mortified, at your behavior. Of Doctor Ponnonner nothing better was to be expected. He is a poor little fat fool who knozus no better. I pity and forgive him. But you, Mr. Gliddon - and you, Silk - who have travelled and resided in Egypt until one might imagine you to the manner born - you, I say, who have been so much among us that you speak Egyptian fully as well, I think, as you write your mother-tongue - you, whom I have always been led to regard as the firm friend of the mummies - I really did anticipate more gentlemanly conduct from you. What am I to think of your standing quietly by and seeing me thus unhandsomely used? What am I to suppose by your permitting Tom, Dick, and Harry to strip me of my coffins, and my clothes, in this wretchedly cold climate? In what light (to come to the point) am I to regard your aiding and abetting that miserable little villain, Doctor Ponnonner, in pulling me by the nose?"

It will be taken for granted, no doubt, that upon hearing this speech under the circumstances we all either made for the door, or fell into violent hysterics, or went off in a general swoon. One of these three things was, I say, to be expected. Indeed each and all of these lines of conduct might have been very plausibly pursued. And, upon my word, I am at a loss to know how or why it was that we pursued neither the one nor the other. But, perhaps, the true reason is to be sought in the spirit of the age, which proceeds by the rule of contraries altogether, and is now usually admitted as the solution of everything in
the way of paradox and impossibility. Or, perhaps, after all, it was only the Mummy's exceedingly natural and matter-of-course air that divested his words of the terrible. However this may be, the facts are clear, and no member of our party betrayed any very particular trepidation, or seemed to consider that anything had gone very especially wrong.

For my part I was convinced it was áll right, and merely stepped aside, out of the range of the Egyptian's fist. Doctor Ponnonner thrust his hands into his breeches' pockets, looked hard at the Mummy, and grew excessively red in the face. Mr. Gliddon stroked his whiskers and drew up the collar of his shirt. Mr. Buckingham hung down his head, and put his right thumb into the left corner of his mouth.

The Egyptian regarded him with a severe countenance for some minutes, and at length, with a sneer, said:
"Why don't you speak, Mr. Buckingham? Did you hear what I asked you, or not? Do take your thumb out of your mouth!"

Mr. Buckingham, hereupon, gave a slight start, took his right thumb out of the left corner of his mouth, and, by way of indemnification, inserted his left thumb in the right corner of the aperture abovementioned.

Not being able to get an answer from Mr. B., the figure turned peevishly to Mr . Gliddon, and, in a peremptory tone, demanded in general terms what we all meant.

Mr. Gliddon replied at great length, in phonetics; and but for the deficiency of American printing-offices in hieroglyphical type, it would afford me much pleas-
ure to record here, in the original, the whole of his very excellent speech.

I may as well take this occasion to remark that all the subsequent conversation, in which the Mummy took a part, was carried on in primitive Egyptian, through the medium (so far as concerned myself and other untravelled members of the company) - through the medium, I say, of Messieurs Gliddon and Buck. ingham, as interpreters. These gentlemen spoke the mother-tongue of the Mummy with inimitable fluency and grace; but I could not help observing that (owing, no doubt, to the introduction of images entirely modern, and, of course, entirely novel to the stranger) the two travellers were reduced, occasionally, to the employment of sensible forms for the purpose of conveying a particular meaning. Mr. Gliddon, at one period, for example, could not make the Egyptian comprehend the term "politics," until he sketched upon the wall, with a bit of charcoal, a little carbunclenosed gentleman, out at elbows, standing upon a stump, with his left leg drawn back, his right arm thrown forward, with his fist shut, the eyes rolled up toward heaven, and the mouth open at an angle of ninety degrees. Just in the same way Mr. Buckingham failed to convey the absolutely modern idea "wig," until (at Doctor Ponnonner's suggestion) he grew very pale in the face, and consented to take off his own.

It will be readily understood that Mr. Gliddon's discourse turned chiefly upon the vast benefits accruing to science from the unrolling and disembowelling of mummies; apologizing, upon this score, for any disturbance that might have been occasioned him, in particular, the individual mummy called Allamistakeo;
and concluding with a mere hint (for it could scarcely be considered more) that, as these little matters were now explained, it might be as well to proceed with the investigation intended. Here Doctor Ponnonner made ready his instruments.

In regard to the latter suggestions of the orator, it appears that Allamistakeo had certain scruples of conscience, the nature of which I did not distinctly learn; but he expressed himself satisfied with the apologies tendered, and, getting down from the table, shook hands with the company all round.

When this ceremony was at an end, we immediately busied ourselves in repairing the damages which our subject had sustained from the scalpel. We sewed up the wound in his temple, bandaged his foot, and applied a square inch of black plaster to the tip of his nose.

It was now observed that the Count (this was the title, it seems, of Allamistakeo) had a slight fit of shivering - no doubt from the cold. The Doctor immediately repaired to his wardrobe, and soon returned with a black dress-coat, made in Jennings' best manner, a pair of sky-blue plaid pantaloons with straps, a pink gingham chemise, a flapped vest of brocade, a white sack overcoat, a walking cane with a hook, a hat with no brim, patent-leather boots, strawcolored kid gloves, an eye-glass, a pair of whiskers, and a waterfall cravat. Owing to the disparity of size between the Count and the Doctor (the proportion being as two to one) there was some little difficulty in adjusting these habiliments upon the person of the Egyptian ; but when all was arranged, he might have been said to be dressed. Mr. Gliddon, therefore, gave him his arm, and led him to a comfortable chair
by the fire, while the Doctor rang the bell upon the spot and ordered a supply of cigars and wine.

The conversation soon grew animated. Much curiosity was, of course, expressed in regard to the somewhat remarkable fact of Allamistakeo's still remaining alive.
"I should have thought," observed Mr. Buckingham, "that it is high time you were dead."
"Why," replied the Count, very much astonished, " I am little more than seven hundred years old! My father lived a thousand, and was by no means in his dotage when he died."

Here ensued a brisk series of questions and computations, by means of which it became evident that the antiquity of the Mummy had been grossly misjudged. It had been five thousand and fifty years, and some months, since he had been consigned to the catacombs at Eleithias.
"But my remark," resumed Mr. Buckingham, " had no reference to your age at the period of interment; (I am willing to grant, in fact, that you are still a young man) and my allusion was to the immensity of time during which, by your own showing, you must have been done up in asphaltum."
"In what?" said the Count.
"In asphaltum," persisted Mr. B.
"Ah, yes; I have some faint notion of what you mean; it might be made to answer, no doubt, - but in my time we employed scarcely anything else than the bichloride of mercury."
"But what we are especially at a loss to understand," said Doctor Ponnonner, "is how it happens that, having been dead and buried in Egypt, five 296
thousand years ago, you are here to-day all alive, and looking so delightfully well."
"Had I been, as you say, dead," replied the Count, " it is more than probable that dead I should still be; for I perceive you are yet in the infancy of Galvanism, and cannot accomplish with it what was a common thing among us in the old days. But the fact is, I fell into catalepsy, and it was considered by my best friends that I was either dead or should be; they accordingly embalmed me at once - I presume you are aware of the chief principle of the embalming process?"
"Why, not altogether."
"Ah, I perceive; - a deplorable condition of ignorance! Well, I cannot enter into details just now: but it is necessary to explain that to embalm (properly speaking) in Egypt, was to arrest indefinitely all the animal functions subjected to the process. I use the word 'animal' in its widest sense, as including the physical not more than the moral and wital being. I repeat that the leading principle of embalmment consisted, with us, in the immediately arresting, and holding in perpetual abeyance, all the animal functions subjected to the process. To be brief, in whatever condition the individual was, at the period of embalmment, in that condition he remained. Now, as it is my good fortune to be of the blood of the Scarabæus, I was embalmed alive, as you see me at present."
"The blood of the Scarabæus!" exclaimed Doctor Ponnonner.
"Yes. The Scarabæus was the insignium, or the 'arms,' of a very distinguished and very rare patrician family. To be 'of the blood of the Scarabæus' is
merely to be one of that family of which the Scarabæus is the insignium. I speak figuratively."
"But what has this to do with your being alive?"
"Why, it is the general custom in Egypt to deprive a corpse, before embalmment, of its bowels and brains; the race of Scarabæi alone did not coincide with the custom. Had I not been a Scarabæus, therefore, I should have been without bowels and brains; and without either it is inconvenient to live."
"I perceive that," said Mr. Buckingham, "and I presume that all the entire mummies that come to hand are of the race of Scarabæi."
"Beyond doubt."
" I thought," said Mr. Gliddon, very meekly, " that the Scarabæus was one of the Egyptian gods."
"One of the Egyptian what?" exclaimed the Mummy, starting to its feet.
"Gods!" repeated the traveller.
" Mr. Gliddon, I really am astonished to hear you talk in this style," said the Count, resuming his chair. "No nation upon the face of the earth has ever acknowledged more than one god. The Scarabæus, the Ibis, etc., were with us (as similar creatures have been with others) the symbols, or media, through which we offered worship to the Creator too august to be more directly approached.'"

There was here a pause. At length the colloquy was renewed by Doctor Ponnonner.
"It is not improbable, then, from what you have explained," said he, "that among the catacombs near the Nile, there may exist other mummies of the Scarabæus tribe, in a condition of vitality."
"There can be no question of it," replied the Count; "all the Scarabæi embalmed accidentally
while alive, are alive. Even some of those purposely so embalmed may have been overlooked by their executors, and still remain in the tombs."
"Will you be kind enough to explain," I said, "what you mean by 'purposely so embalmed'?"
" With great pleasure," answered the Mummy, after surveying me leisurely through his eye-glass - for it was the first time I had ventured to address him a direct question.
" With great pleasure," he said. "The usual duration of man's life, in my time, was about eight hundred years. Few men died, unless by most extraordinary accident, before the age of six hundred; few lived longer than a decade of centuries; but eight were considered the natural term. After the discovery of the embalming principle, as I have already described it to you, it occurred to our philosophers that a laudable curiosity might be gratified, and, at the same time, the interests of science much advanced, by living this natural term in instalments. In the case of history, indeed, experience demonstrated that something of this kind was indispensable. An historian, for example, having attained the age of five hundred, would write a book with great labor and then get himself carefully embalmed; leaving instructions to his executors pro. tem., that they should cause him to be revivified after the lapse of a certain period - say five or six hundred years. Resuming existence at the expiration of this time, he would invariably find his great work converted into a species of hap-hazard note-book - that is to say, into a kind of literary arena for the conflicting guesses, riddles, and personal squabbles of whole herds of exasperated commentators. These guesses, etc., which passed under the
name of annotations, or emendations, were found so completely to have enveloped, distorted, and overwhelmed the text, that the author had to go about with a lantern to discover his own book. When discovered, it was never worth the trouble of the search. After re-writing it throughout, it was regarded as the bounden duty of the historian to set himself to work, immediately, in correcting from his own private knowledge and experience, the traditions of the day concerning the epoch at which he had originally lived. Now this process of rescription and personal rectification, pursued by various individual sages, from time to time, had the effect of preventing our history from degenerating into absolute fable."
"I beg your pardon," said Doctor Ponnonner at this point, laying his hand gently upon the arm of the Egyptian - "I beg your pardon, sir, but may I presume to interrupt you for one moment?"
" By all means, sir," replied the Count, drawing up.
"I merely wished to ask you a question," said the Doctor. "You mentioned the historian's personal correction of traditions respecting his own epoch. Pray, sir, upon an average, what proportion of these Kabbala were usually found to be right ?"
"The Kabbala, as you properly term them, sir, were generally discovered to be precisely on a par with the facts recorded in the un-rewritten histories themselves; - that is to say, not one individual iota of either was ever known, under any circumstances, to be not totally and radically wrong."
"But since it is quite clear," resumed the Doctor, "that at least five thousand years have elapsed since your entombment, I take it for granted that your histories at that period, if not your traditions, were suffi-
ciently explicit on that one topic of universal interest, the Creation, which took place, as I presume you are aware, only about ten centuries before."
"Sir!" said the Count Allamistakeo.
The Doctor repeated his remarks, but it was only after much additional explanation, that the foreigner could be made to comprehend them. The latter at length said, hesitatingly:
"The ideas you have suggested are to me, I confess, utterly novel. During my time I never knew any one to entertain so singular a fancy as that the universe (or this world if you will have it so) ever had a beginning at all. I remember once, and once only, hearing something remotely hinted, by a man of many speculations, concerning the origin of the human race; and by this individual, the very word Adam (or Red Earth), which you make use of, was employed. He employed it, however, in a generical sense, with reference to the spontaneous germination from rank soil (just as a thousand of the lower genera of creatures are germinated) - the spontaneous germination, I say, of five vast hordes of men, simultaneously upspringing in five distinct and nearly equal divisions of the globe."

Here, in general, the company shrugged their shoulders, and one or two of us touched our foreheads with a very significant air. Mr. Silk Buckingham, first glancing slightly at the occiput and then at the sinciput of Allamistakeo, spoke as follows :
" The long duration of human life in your time, together with the occasional practice of passing it, as you have explained, in instalments, must have had, indeed, a strong tendency to the general development and conglomeration of knowledge. I presume, there-
fore, that we are to attribute the marked inferiority of the old Egyptians in all particulars of science, when compared with the moderns, and more especially with the Yankees, altogether to the superior solidity of the Egyptian skull."
"I confess again," replied the Count, with much suavity, "that I am somewhat at a loss to comprehend you; pray, to what particulars of science do you allude?"

Here our whole party, joining voices, detailed, at great length, the assumptions of phrenology and the marvels of animal magnetism.

Having heard us to an end, the Count proceeded to relate a few anecdotes, which rendered it evident that prototypes of Gall and Spurzheim had flourished and faded in Egypt so long ago as to have been nearly forgotten, and that the manœuvres of Mesmer were really very contemptible tricks when put in collation with the positive miracles of the Theban savants, who created lice and a great many other similar things.

I here asked the Count if his people were able to calculate eclipses. He smiled rather contemptuously. and said they were.

This put me a little out, but I began to make other inquiries in regard to his astronomical knowledge, when a member of the company, who had never as yet opened his mouth, whispered in my ear that for information on this head I had better consult Ptolemy (whoever Ptolemy is) as well as one Plutarch De Facie Lunce.

I then questioned the Mummy about burning-glasses and lenses, and, in general, about the manufacture of glass; but I had not made an end of my queries
before the silent member again touched me quietly on the elbow, and begged me for God's sake to take a peep at Diodorus Siculus. As for the Count, he merely asked me, in the way of reply, if we moderns possessed any such microscopes as would enable us to cut cameos in the style of the Egyptians. While I was thinking how I should answer this question, little Doctor Ponnonner committed himself in a very extraordinary way.
"Look at our architecture!" he exclaimed, greatly to the indignation of both the travellers, who pinched him black and blue to no purpose.
"Look," he cried with enthusiasm, "at the BowlingGreen Fountain in New York! or if this be too vast a contemplation, regard for a moment the Capitol at Washington, D. C.!" - and the good little medical man went on to detail, very minutely, the proportions of the fabric to which he referred. He explained that the portico alone was adorned with no less than four and twenty columns, five feet in diameter, and ten feet apart.

The Count said that he regretted not being able to remember, just at that moment, the precise dimensions of any one of the principal buildings of the city of Aznac, whose foundations were laid in the night of Time, but the ruins of which were still standing, at the epoch of his entombment, in a vast plain of sand to the westward of Thebes. He recollected, however (talking of porticos), that one, affixed to an inferior palace in a kind of suburb called Carnac, consisted of a hundred and forty-four columns, thirty-seven feet each in circumference, and twenty-five feet apart. The approach of this portico, from the Nile, was through an avenue two miles long, composed of
sphinxes, statues, and obelisks, twenty, sixty, and a hundred feet in height. The palace itself (as well as he could remember) was, in one direction, two miles long, and might have been, altogether, about seven in circuit. Its walls were richly painted all over, within and without, with hieroglyphics. He would not pretend to assert that even fifty or sixty of the Doctor's Capitols might have been built within these walls, but he was by no means sure that two or three hundred of them might not have been squeezed in with some trouble. That palace at Carnac was an insignificant little building after all. He (the Count), however, could not conscientiously refuse to admit the ingenuity, magnificence, and superiority of the Fountain at the Bowling Green, as described by the Doctor. Nothing like it, he was forced to allow, had ever been seen in Egypt or elsewhere.

I here asked the Count what he had to say to our railroads.
" Nothing," he replied, "in particular." They were rather slight, rather ill-conceived, and clumsily put together. They could not be compared, of course, with the vast, level, direct, iron-grooved causeways, upon which the Egyptians conveyed entire temples and solid obelisks of a hundred and fifty feet in altitude.

I spoke of our gigantic mechanical forces.
He agreed that we knew something in that way, but inquired how I should have gone to work in getting up the imposts on the lintels of even the little palace at Carnac.

This question I concluded not to hear, and demanded if he had any idea of artesian wells; but he simply raised his eyebrows; while Mr. Gliddon winked at me very hard and said, in a low tone, that
one had been recently discovered by the engineers employed to bore for water in the Great Oasis.

I then mentioned our steel; but the fore1gner elevated his nose, and asked me if our steel could have executed the sharp carved work seen on the obelisks, and which was wrought altogether by edge-tools of copper

This disconcerted us so greatly that we thought it advisable to vary the attack to Metaphysics. We sent for a copy of a book called the "Dial," and read out of it a chapter or two about something which is not very clear, but which the Bostonians call the "Great Movement" or "Progress."

The Count merely said that "Great Movements" were awfully common things in his day, and as for "Progress," it was at one time quite a nuisance, but it never progressed.

We then spoke of the great beauty and importance of Democracy, and were at much trouble in impressing the Count with a due sense of the advantages we enjoyed in living where there was suffrage ad libitum, and no king.

He listened with marked interest, and in fact seemed not a little amused When we had done, he said that, a great while ago, there had occurred something of a very similar sort. Thirteen Egyptian provinces determined all at once to be free, and so set a magnificent example to the rest of mankind. They assembled their wise men, and concocted the most ingenious constitution it is possible to conceive. For a while they managed remarkably well; only their habit of bragging was prodigious. The thing ended, however, in the consolidation of the thirteen states, with some fifteen or twenty others, in the most odious and in-
supportable despotism that ever was heard of upon the face of the Earth.

I asked what was the name of the usurping tyrant.
As well as the Count could recollect, it was Mob.
Not knowing what to say to this, I raised my voice, and deplored the Egyptian ignorance of steam.

The Count looked at me with much astonishment, but made no answer. The silent gentleman, however, gave me a violent nudge in the ribs with his elbows - told me I had sufficiently exposed myself for once - and demanded if I was really such a fool as not to know that the modern steam-engine is derived from the invention of Heron, through Solomon de Caus.

We were now in imminent danger of being discom. fited ; but, as good luck would have it, Doctor Ponnonner, having rallied, returned to our rescue, and inquired if the people of Egypt would seriously pretend to rival the moderns in the all important particular of dress.

The Count, at this, glanced downwards to the straps of his pantaloons, and then taking hold of the end of one of his coat-tails, held it up close to his eyes for some minutes. Letting it fall, at last, his mouth extended itself very gradually from ear to ear; but I do not remember that he said anything in the way of reply.

Hereupon we recovered our spirits, and the Doctor, approaching the Mummy with great dignity, desired it to say candidly, upon its honor as a gentleman, if the Egyptians had comprehended, at any period, the manufacture of either Ponnonner's lozenges or Brandreth's pills.

We looked, with profound anxiety, for an answer but in vain. It was not forthcoming. The Egyptian
blushed and hung down his head. Never was triumph more consummate; never was defeat borne with so ill a grace. Indeed, I could not endure the spectacle of the poor Mummy's mortification. I reached my hat, bowed to him stiffly, and took leave.

Upon getting home I found it past four o'clock, and went immediately to bed. It is now ten, A. m. I have been up since seven, penning these memoranda for the benefit of my family and of mankind. The former I shall behold no more. My wife is a shrew. The truth is, I am heartily sick of this life and of the nineteenth century in general. I am convinced that everything is going wrong. Besides, I am anxious to know who will be President in 2045. As soon, therefore, as I shave and swallow a cup of coffee, I shall just step over to Ponnonner's and get embalmed for a couple of hundred years.

## MESMERIC REVELATION

WHATEVER doubt may still envelop the rationale of mesmerism, its startling facts are now almost universally admitted. Of these latter, those who doubt are your mere doubters by profession - an unprofit. able and disreputable tribe. There can be no more absolute waste of time than the attempt to prove, at the present day, that man, by mere exercise of will, can so impress his fellow, as to cast him into an abnormal condition, of which the phenomena resemble very closely those of death, or at least resemble them more nearly than they do the phenomena of any other normal condition within our cognizance; that, while in this state, the person so impressed employs only with effort, and then feebly, the external organs of sense, yet perceives, with keenly refined perception, and through channels supposed unknown, matters beyond the scope of the physical organs; that, moreover, his intellectual faculties are wonderfully exalted and invigorated ; that his sympathies with the person so impressing him are profound; and, finally, that his susceptibility to the impression increases with its frequency, while, in the same proportion, the peculiar phenomena elicited are more extended and more pronounced.

I say that these - which are the laws of mesmerism in its general features - it would be supererogation to
demonstrate; nor shall I inflict upon my readers so needless a demonstration to-day. My purpose at present is a very different one indeed. I am impelled, even in the teeth of a world of prejudice, to detail without comment the very remarkable substance of a colloquy, occurring between a sleep-waker and myself.

I had been long in the habit of mesmerizing the person in question (Mr. Vankirk), and the usual acute susceptibility and exaltation of the mesmeric perception had supervened. For many months he had been laboring under confirmed phthisis, the more distressing effects of which had been relieved by my manipulations; and on the night of Wednesday, the fifteenth instant, I was summoned to his bedside.

The invalid was suffering with acute pain in the region of the heart, and breathed with great difficulty, having all the ordinary symptoms of asthma. In spasms such as these he had usually found relief from the application of mustard to the nervous centres, but to-night this had been attempted in vain.

As I entered his room he greeted me with a cheerful smile, and, although evidently in much bodily pain, appeared to be mentally quite at ease.
" I sent for you to-night," he said, "not so much to administer to my bodily ailment, as to satisfy me concerning certain psychal impressions which, of late, have occasioned me much anxiety and surprise. I need not tell you how sceptical I have hitherto been on the topic of the soul's immortality. I cannot deny that there has always existed, as if in that very soul which I have been denying, a vague half-sentiment of its own existence. But this half-sentiment at no time amounted to conviction. With it my reason had nothing to do. All attempts at logical inquiry re-
sulted, indeed, in leaving me more sceptical than before. I had been advised to study Cousin. I studied him in his own works as well as in those of his European and American echoes. The 'Charles Elwood' of Mr. Brownson, for example, was placed in my hands. I read it with profound attention. Throughout I found it logical, but the portions which were not merely logical were unhappily the initial arguments of the disbelieving hero of the book. In his summing up it seemed evident to me that the reasoner had not even succeeded in convincing himself. His end had plainly forgotten his beginning, like the government of Trinculo. In short, I was not long in perceiving that if man is to be intellectually convinced of his own immortality, he will never be so convinced by the mere abstractions which have been so long the fashion of the moralists of England, of France, and of Germany. Abstractions may amuse and exercise, but take no hold on the mind. Here upon earth, at least, philosophy, I am persuaded, will always in vain call upon us to look upon qualities as things. The will may assent - the soul - the intellect, never.
" I repeat, then, that I only half felt, and never intellectually believed. But latterly there has been a certain deepening of the feeling, until it has come so nearly to resemble the acquiescence of reason, that I find it difficult to distinguish between the two. I am enabled, too, plainly to trace this effect to the mesmeric influence. I cannot better explain my meaning than by the hypothesis that the mesmeric exaltation enables me to perceive a train of ratiocination which, in my abnormal existence, convinces, but which, in full accordance with the mesmeric phenomena, does not
extend, except through its effect, into my normal condition. In sleep-waking, the reasoning and its conclusion - the cause and its effect - are present together. In my natural state, the cause vanishing, the effect only, and perhaps only partially, remains.
"These considerations have led me to think that some good results might ensue from a series of welldirected questions propounded to me while mesmerized. You have often observed the profound self-cognizance evinced by the sleep-waker - the extensive knowledge he displays upon all points relating to the mesmeric condition itself; and from this self-cognizance may be deduced hints for the proper conduct of a catechism."

I consented of course to make this experiment. A few passes threw Mr. Vankirk into the mesmeric sleep. His breathing became immediately more easy, and he seemed to suffer no physical uneasiness. The following conversation then ensued: -V . in the dialogue representing the patient, and P. myself.
$P$. Are you asleep?
$V$. Yes - no; I would rather sleep more soundly.
$P$. [After a few more passes.] Do you sleep now?
$l$. Yes.
$P$. How do you think your present illness will result ?
$V$. [After a long hesitation and speaking as if with effort.] I must die.
$P$. Does the idea of death afflict you?
$V$. [Very quickly.] No - no!
$P$. Are you pleased with the prospect?
$V$. If I were awake I should like to die, but now it
is no matter The mesmeric condition is so near death as to content me.
$P$. I wish you would explain yourself, Mr. Vankirk.
$V$. I am willing to do so, but it requires more effort than I feel able to make. You do not question me properly.
$P$. What then shall I ask ?
$V$. You must begin at the beginning.
$P$. The beginning! but where is the beginning?
$V$. You know that the beginning is God. [This was said in a low, fluctuating tone, and with every sign of the most profound veneration.]
$P$. What then is God?
$V$. [Hesitating for many minutes.] I cannot tell.
$P$. Is not God spirit?
$V$. While I was awake I knew what you meant by " spirit," but now it seems only a word - such for instance as truth, beauty - a quality, I mean.
$P$. Is not God immaterial?
$V$. There is no immateriality - it is a mere word. That which is not matter, is not at all - unless qualities are things.
$P$. Is God, then, material?
$V$. No. [This reply startled me very much.]
$P$. What then is he?
$V$. [After a long pause, and mutteringly.] I see -but it is a thing difficult to tell. [Another long pause.] He is not spirit, for he exists. Nor is he matter, as you understand it. But there are gradations of matter of which man knows nothing; the grosser impelling the finer, the finer pervading the grosser. The atmosphere, for example, impels the electric principle, while the electric principle permeates the atmosphere. These gradations of matter increase in rarity or fineness, until we arrive at a matter unparticled - without particles - indivisible - one; and here the law of impulsion and permeation is modified.

The ultimate, or unparticled, matter not only permeates all things but impels all things - and thus is all things within itself. This matter is God. What men attempt to embody in the word "thought" is this matter in motion.
$P$. The metaphysicians maintain that ail action is reducible to motion and thinking, and that the latter is the origin of the former.
$V$. Yes; and I now see the confusion of idea. Motion is the action of mind - not of thinking. The unparticled matter, or God, in quiescence, is (as nearly as we can conceive it) what men call mind. And the power of self movement (equivalent in effect to human volition) is, in the unparticled matter, the result of its unity and omniprevalence; how I know not, and now clearly see that I shall never know. But the unparticled matter, set in motion by a law, or quality, existing within itself, is thinking.
$P$. Can you give me no more precise idea of what you term the unparticled matter?
$V$. The matters of which man is cognizant escape the senses in gradation. We have, for example, a metal, a piece of wood, a drop of water, the atmosphere, a gas, caloric, electricity, the luminiferous ether. Now we call all these things matter, and embrace all matter in one general definition; but in spite of this, there can be no two ideas more essentially distinct than that which we attach to a metal, and that which we attach to the luminiferous ether. When we reach the latter, we feel an almost irresistible inclination to class it with spirit, or with nihility. The only consideration which restrains us is our conception of its atomic constitution; and here even we have to seek aid from our notion of an atom, as something possess-
ing an infinite minuteness, solidity, palpability, weight. Destroy the idea of the atomic constitution and we should no longer be able to regard the ether as an entity, or at least as matter. For want of a better word we might term it spirit. Take, now, a step beyond the luminiferous ether - conceive a matter as much more rare than the ether as this ether is more rare than the metal, and we arrive at once (in spite of all the school dogmas) at a unique mass - an unpar. ticled matter. For although we may admit infinite littleness in the atoms themselves, the infinitude of littleness in the spaces between them is an absurdity. There will be a point - there will be a degree of rarity, at which, if the atoms are sufficiently numerous, the interspaces must vanish, and the mass absolutely coalesce. But the consideration of the atomic constitution being now taken away, the nature of the mass inevitably glides into what we conceive of spirit. It is clear, however, that it is as fully matter as before. The truth is, it is impossible to conceive spirit, since it is impossible to imagine what is not. When we flatter ourselves that we have formed its conception, we have merely deceived our understanding by the consideration of infinitely rarified matter.
$P$. There seems to me an insurmountable objection to the idea of absolute coalescence; and that is the very slight resistance experienced by the heavenly bodies in their revolutions through space - a resistance now ascertained, it is true, to exist in some degree, but which is, nevertheless, so slight as to have been quite overlooked by the sagacity even of Newton. We know that the resistance of bodies is, chiefly, in proportion to their density. Absolute coalescence is absolute density. Where there are no
interspaces, there can be no yielding. An ether, absolutely dense, would put an infinitely more effectual stop to the progress of a star than would an ether of adamant or of iron.
$V$. Your objection is answered with an ease which is nearly in the ratio of its apparent unanswerability. As regards the progress of the star, it can make no difference whether the star passes through the ether or the ether through it. There is no astronomical error more unaccountable than that which reconciles the known retardation of the comets with the idea of their passage through an ether: for, however rare this ether be supposed, it would put a stop to all sidereal revolution in a very far briefer period than has been admitted by those astronomers who have endeavored to slur over a point which they found it impossible to comprehend. The retardation actually experienced is, on the other hand, about that which might be expected from the friction of the ether in the instantaneous passage through the orb. In the one case, the retarding force is momentary and complete within itself in the other it is endlessly accumulative.
$P$. But in all this - in this identification of mere matter with God - is there nothing of irreverence? [I was forced to repeat this question before the sleepwaker fully comprehended my meaning.]
$V$. Can you say why matter should be less reverenced than mind? But you forget that the matter of which I speak is, in all respects, the very " mind" or "spirit" of the schools, so far as regards its high capacities, and is, moreover, the "matter" of these schools at the same time. God, with all the powers attributed to spirit, is but the perfection of matter.
$P$. You assert, then, that the unparticled matter, in motion, is thought?
$V$. In general, this motion is the universal thought of the universal mind. This thought creates. All created things are but the thoughts of God.
$P$. You say, "in general."
$V$. Yes. The universal mind is God. For new individualities, matter is necessary.
$P$. But you now speak of "mind" and "matter" as do the metaphysicians.
$V$. Yes - to avoid confusion. When I say " mind," I mean the unparticled or ultimate matter; by " matter," I intend all else.
$P$. You were saying that "for new individualities matter is necessary."
$V$. Yes; for mind, existing unincorporate, is merely God. To create individual, thinking beings, it was necessary to incarnate portions of the divine mind. Thus man is individualized. Divested of corporate investiture, he were God. Now, the particular motion of the incarnated portions of the unparticled matter is the thought of man; as the motion of the whole is that of God.
$P$. You say that divested of the body man will be God?
$V$. [After much hesitation.] I could not have said this; it is an absurdity.
$P$. [Referring to my notes.] You did say that "divested of corporate investiture man were God."
$V$. And this is true. Man thus divested would be God - would be unindividualized. But he can never be thus divested, at least never will be, else we must imagine an action of God returning upon itself -a purposeless and futile action. Man is a creature.

Creatures are thoughts of God. It is the nature of thought to be irrevocable.
$P$. I do not comprehend. You say that man will never put off the body?
$V$. I say that he will never be bodiless.
$P$. Explain.
$V$. There are two bodies - the rudimental and the complete; corresponding with the two conditions of the worm and the butterfly. What we call "death," is but the painful metamorphosis. Our present incarnation is progressive, preparatory, temporary. Our future is perfected, ultimate, immortal. The ultimate life is the full design.
$P$. But of the worm's metamorphosis we are palpably cognizant.
V. We, certainly - but not the worm. The matter of which our rudimental body is composed is within the ken of the organs of that body; or, more distinctly, our rudimental organs are adapted to the matter of which is formed the rudimental body; but not to that of which the ultimate is composed. The ultimate body thus escapes our rudimental senses, and we perceive only the shell which falls, in decaying, from the inner form ; not that inner form itself; but this inner form, as well as the shell, is appreciable by those who have already acquired the ultimate life.
$P$. You have often said that the mesmeric state very nearly resembles death. How is this?
$V$. When I say that it resembles death, I mean that it resembles the ultimate life; for when I am entranced the senses of my rudimental life are in abeyance, and I perceive external things directly, without organs, through a medium which I shall employ in the ultimate, unorganized life.

## $P$. Unorganized ?

$V$. Yes; organs are contrivances by which the individual is brought into sensible relation with particular classes and forms of matter, to the exclusion of other classes and forms. The organs of man are adapted to his rudimental condition, and to that only; his ultimate condition, being unorganized, is of unlimited comprehension in all points but one - the nature of the volition of God - that is to say, the motion of the unparticled matter. You will have a distinct idea of the ultimate body by conceiving it to be entire brain. This it is not; but a conception of this nature will bring you near a comprehension of what it is. A luminous body imparts vibration to the luminiferous ether. The vibrations generate similar ones within the retina; these again communicate similar ones to the optic nerve. The nerve conveys similar ones to the brain; the brain, also, similar ones to the unparticled matter which permeates it. The motion of this latter is thought, of which perception is the first undulation. This is the mode by which the mind of the rudimental life communicates with the external world; and this external world is, to the rudimental life, limited, through the idiosyncrasy of its organs. But in the ultimate, unorganized life, the external world reaches the whole body (which is of a substance having affinity to the brain, as I have said), with no other intervention than that of an infinitely rarer ether than even the luminiferous; and to this ether - in unison with it - the whole body vibrates, setting in motion the unparticled matter which permeates it. It is to the absence of idiosyncratic organs, therefore, that we must attribute the nearly unlimited perception of
the ultimate life. To rudimental beings, organs are the cages necessary to confine them until fledged.
$P$. You speak of rudimental "beings." Are there other rudimental thinking beings than man?
$V$. The multitudinous conglomeration of rare matter into nebulæ, planets, suns, and other bodies which are neither nebulæ, suns, nor planets, is for the sole purpose of supplying pabutum for the idiosyncrasy of the organs of an infinity of rudimental beings. But for the necessity of the rudimental, prior to the ultimate, life, there would have been no bodies such as these. Each of these is tenanted by a distinct variety of organic, rudimental, thinking creatures. In all, the organs vary with the features of the place tenanted. At death, or metamorphosis, these creatures, enjoying the ultimate life - immortality - and cognizant of all secrets but ihe one, act all things and pass everywhere by mere volition: indwelling, not the stars, which to us seem the sole palpabilities, and for the accommodation of which we blindly deem space created - but that SPACE itself, that infinity of which the truly substantive vastness swallows up the star-shadows, blotting them out as non-entities from the perception of the angels.
$P$. You say that "but for the necessity of the rudimental life" there would have been no stars. But why this necessity ?
$V$. In the inorganic life, as well as in the inorganic matter generally, there is nothing to impede the action of one simple unique law - the Divine Volition. With the view of producing impediment, the organic life and matter (complex, substantial, and law-encumbered) were contrived.
$P$. But again - why need this impediment have been produced ?
$V$. The result of law inviolate is perfection, right, negative happiness. The result of law violate is imperfection, wrong, positive pain. Through the impediments afforded by the number, complexity, and substantiality of the laws of organic life and matter, the violation of law is rendered to a certain extent practicable. Thus pain, which in the inorganic life is impossible, is possible in the organic.
$P$. But to what good end is pain thus rendered possible?
$V$. All things are either good or bad by comparison. A sufficient analysis will show that pleasure, in all cases, is but the contrast of pain. Positive pleasure is a mere idea. To be happy at any one point we must have suffered at the same. Never to suffer would have been never to have been blessed. But it has been shown that, in the inorganic life, pain cannot be; thus the necessity for the organic. The pain of the primitive life of Earth is the sole basis of the bliss of the ultimate life in Heaven.
$P$. Still, there is one of your expressions which I find it impossible to comprehend - " the truly substantive vastness of infinity."
$V$. This, probably, is because you have no sufficiently generic conception of the term "substance" itself. We must not regard it as a quality, but as a sentiment: it is the perception, in thinking beings, of the adaptation of matter to their organization. There are many things on the Earth, which would be nihility to the inhabitants of Venus: many things visible and tangible in Venus, which we could not be brought to appreciate as existing at all. But to
the inorganic beings - to the angels - the whole of the unparticled matter is substance; that is to say, the whole of what we term "space" is to them the truest substantiality; the stars, meantime, through what we consider their materiality, escaping the angelic sense, just in proportion as the unparticled matter, through what we consider its immateriality, eludes the organic.

As the sleep-waker pronounced these latter words, in a feeble tone, I observed on his countenance a singular expression, which somewhat alarmed me, and induced me to awake him at once. No sooner had I done this, than, with a bright smile irradiating all his features, he fell back upon his pillow and expired. I noticed that in less than a minute afterward his corpse had all the stern rigidity of stone. His brow was of the coldness of ice. Thus, ordinarily, should it have appeared only after long pressure from Azrael's hand. Had the sleep-waker, indeed, during the latter portion of his discourse, been addressing me from out the region of the shadows?

## THE FACTS IN THE CASE OF M. VALDEMAR

OF course I shall not pretend to consider it any matter for wonder, that the extraordinary case of M . Valdemar has excited discussion. It would have been a miracle had it not - especially under the circumstances. Through the desire of all parties concerned to keep the affair from the public, at least for the present, or until we had farther opportunities for investigation - through our endeavors to effect this - a garbled or exaggerated account made its way into society, and became the source of many unpleasant misrepresentations, and, very naturally, of a great deal of disbelief.

It is now rendered necessary that I give the facts, as far as I comprehend them myself. They are, succinctly, these:

My attention, for the last three years, had been repeatedly drawn to the subject of Mesmerism; and about nine months ago it occurred to me, quite suddenly, that in the series of experiments made hitherto there had been a very remarkable and most unaccountable omission:- no person had as yet been mesmerized in articulo mortis. It remained to be seen, first, whether, in such condition, there existed in the patient any susceptibility to the magnetic
influence; secondly, whether, if any existed, it was impaired or increased by the condition; thirdly, to what extent, or for how long a period, the encroachments of Death might be arrested by the process. There were other points to be ascertained, but these most excited my curiosity - the last in especial, from the immensely important character of its consequences.

In looking around me for some subject by whose means I might test these particulars, I was brought to think of my friend, M. Ernest Valdemar, the wellknown compiler of the Bibliotheca Forensica, and author (under the nom de plume of Issachar Marx) of the Polish versions of Wallenstein and Gargantua. M. Valdemar, who has resided principally at Harlem, N. Y., since the year 1839, is (or was) particularly noticeable for the extreme spareness of his person - his lower limbs much resembling those of John Randolph; and also for the whiteness of his whiskers, in violent contrast to the blackness of his hair - the latter, in consequence, being very generally mistaken for a wig. His temperament was markedly nervous, and rendered him a good subject for mesmeric experiment. On two or three occasions I had put him to sleep with little difficulty, but was disappointed in other results which his peculiar constitution had naturally led me to anticipate. His will was at no period positively, or thoroughly, under my control, and, in regard to clairvoyance, I could accomplish with him nothing to be relied upon. I always attributed my failure at these points to the disordered state of his health. For some months previous to my becoming acquainted with him, his physicians had declared him in a confirmed phthisis. It was
his custom, indeed, to speak calmly of his approaching dissolution as of a matter neither to be avoided nor regretted.

When the ideas to which I have alluded first occurred to me, it was of course very natural that I should think of M. Valdemar. I knew the steady philosophy of the man too well to apprehend any scruples from him; and he had no relatives in America who would be likely to interfere. I spoke to him frankly upon the subject; and, to my surprise, his interest seemed vividly excited. I say to my surprise ; for, although he had always yielded his person freely to my experiments, he had never before given me any tokens of sympathy with what I did. His disease was of that character which would admit of exact calculation in respect to the epoch of its termination in death; and it was finally arranged between us that he would send for me about twentyfour hours before the period announced by his physicians as that of his decease.

It is now rather more than seven months since I received, from M. Valdemar himself, the subjoined note:
"My dear P - , You may as well come now. D and F ——are agreed that I cannot hold out beyond tomorrow midnight; and I think they have hit the time very nearly.

> " Valdemar."

I received this note within half an hour after it was written, and in fifteen mınutes more I was in the dying man's chamber. I had not seen him for ten days, and was appalled by the fearful alteration which the brief interval had wrought in him. His face wore a leaden hue; the eyes were utterly lustreless; and
the emaciation was so extreme that the skin had been broken through by the cheek-bones. His expectoration was excessive. The pulse was barely perceptible. He retained, nevertheless, in a very remarkable manner, both his mental power and a certain degree of physical strength. He spoke with distinctness - took some palliative medicines without aid - and, when I entered the room, was occupied in pencilling memoranda in a pocket-book. He was propped up in the bed by pillows. Doctors D and F - were in attendance.

After pressing Valdemar's hand, I took these gentlemen aside, and obtained from them a minute account of the patient's condition. The left lung had been for eighteen months in a semi-osseous or cartilaginous state, and was, of course, entirely useless for all purposes of vitality. The right, in its upper portion, was also partially, if not thoroughly, ossified, while the lower region was merely a mass of purulent tubercles, running one into another. Several extensive perforations existed; and, at one point, permanent adhesion to the ribs had taken place. These appearances in the right lobe were of comparatively recent date. The ossification had proceeded with very unusual rapidity; no sign of it had been discovered a month before, and the adhesion had only been observed during the three previous days. Independently of the phthisis, the patient was suspected of aneurism of the aorta; but on this point the osseous symptoms rendered an exact diagnosis impossible. It was the opinion of both physicians that M. Valdemar would die about midnight on the morrow (Sunday). It was then seven o'clock on Saturday evening.

On quitting the invalid's bedside to hold conversation with myself, Doctors D - and F —_had bidden him a final farewell. It had not been their intention to return; but, at my request, they agreed to look in upon the patient about ten the next night.

When they had gone, I spoke freely with M. Valdemar on the subject of his approaching dissolution, as well as, more particularly, of the experiment proposed. He still professed himself quite willing and even anxious to have it made, and urged me to commence it at once. A male and a female nurse were in attendance; but I did not feel myself altogether at liberty to engage in a task of this character with no more reliable witnesses than these people, in case of sudden accident, might prove. I therefore postponed operations until about eight the next night, when the arrival of a medical student, with whom I had some acquaintance (Mr. Theodore L-l), relieved me from farther embarrassment. It had been my design, originally, to wait for the physicians; but I was induced to proceed, first, by the urgent entreaties of M. Valdemar, and secondly, by my conviction that I had not a moment to lose, as he was evidently sinking fast.

Mr. L _ 1 was so kind as to accede to my desire that he would take notes of all that occurred; and it is from his memoranda that what I now have to relate is, for the most part, either condensed or copied verbation.

It wanted about five minutes of eight when, taking the patient's hand, I begged him to state, as distinctly as he could, to Mr. L- 1 , whether he (M, Valdemar) was entirely willing that I should make the experiment of mesmerizing him in his then condition.

He replied feebly, yet quite audibly, "Yes, I wish to be mesmerized"-adding immediately afterwards, "I fear you have deferred it too long."
While he spoke thus, I commenced the passes which I had already found most effectual in subduing him. He was evidently influenced with the first lateral stroke of my hand across his forehead; but, although I exerted all my powers, no farther perceptible effect was induced until some minutes after ten o'clock, when Doctors D - and F - called, according to appointment. I explained to them, in a few words, what I designed, and as they opposed no objection, saying that the patient was already in the death agony, I proceeded without hesitation-exchanging, however, the lateral passes for downward ones, and directing my gaze entirely into the right eye of the sufferer.

By this time his pulse was imperceptible and his breathing was stertorous, and at intervals of half a minute.

This condition was nearly unaltered for a quarter of an hour. At the expiration of this period, however, a natural although a very deep sigh escaped the bosom of the dying man, and the stertorous breathing ceased - that is to say, its sterto:ousness was no longer apparent; the intervals were undiminished. The patient's extremities were of an icy coldness.

At five minutes before eleven, I perceived unequivocal signs of the mesmeric influence. The glassy roll of the eye was changed for that expression of uneasy inward examination which is never seen except in cases of sleep-waking, and which it is quite impossible to mistake. With a few rapid lateral passes 1 made the lids quiver, as in incipient sleep, and with a
few more I closed them altogether. I was not satisfied, however, with this, but continued the manipulations vigorously, and with the fullest exertion of the will, until I had completely stiffened the limbs of the slumberer, after placing them in a seemingly easy position. The legs were at full length; the arms were nearly so, and reposed on the bed at a moderate distance from the loins. The head was very slightly elevated.

When I had accomplished this, it was fully midnight, and I requested the gentlemen present to examine M. Valdemar's condition. After a few experiments, they admitted him to be in an unusually perfect state of mesmeric trance. The curiosity of both the physicians was greatly excited. Dr. D - resolved at once to remain with the patient all night, while Dr. F _ took leave with a promise to return at daybreak. Mr. L-l and the nurses remained.

We left M. Valdemar entirely undisturbed until about three o'clock in the morning, when I approached him and found him in precisely the same condition as when Dr. F-went away - that is to say, he lay in the same position; the pulse was imperceptible; the breathing was gentle (scarcely noticeable, unless through the application of a mirror to the lips); the eyes were closed naturally; and the limbs were as rigid and as cold as marble. Still, the general appearance was certainly not that of death.

As I approached M. Valdemar I made a kind of half effort to influence his right arm into pursuit of my own, as I passed the latter gently to and fro above his person. In such experiments with this patient, I had never perfectly succeeded before, and assuredly I had little thought of succeeding now; but, to my
astonishment, his arm very readily, although feebly, followed every direction I assigned it with mine. I determined to hazard a few words of conversation.
"M. Valdemar," I said, "are you asleep?" He made no answer, but I perceived a tremor about the lips, and was thus induced to repeat the question, again and again. At its third repetition, his whole frame was agitated by a very slight shivering; the eyelids unclosed themselves so far as to display a white line of the ball; the lips moved sluggishly, and from between them, in a barely audible whisper, issued the words:
"Yes; - asleep now. Do not wake me!-let me die so!"

I here felt the limbs and found them as rigid as ever. The right arm, as before, obeyed the direction of my hand. I questioned the sleep-waker again:
"Do you still feel pain in the breast, M. Valdemar?"
The answer now was immediate, but even less audible than before:
"No pain - I am dying."
I did not think it advisable to disturb him farther just then, and nothing more was said or done until the arrival of Dr. F—, who came a little before sunrise, and expressed unbounced astonishment at finding the patient still alive. After feeling the pulse and applying a mirror to the lips, he requested me to speak to the sleep-waker again. I did so, saying:
"M. Valdemar, do you still sleep?"
As before, some minutes elapsed ere a reply was made; and during the interval the dying man seemed to be collecting his energies to speak. At my fourth repetition of the question, he said very faintly, almost inaudibly:
"Yes; still asleep - dying."
It was now the opinion, or rather the wish, of the physicians, that M. Valdemar should be suffered to remain undisturbed in his present apparently tranquil condition, until death should supervene - and this, it was generally agreed, must now take place within a few minutes. I concluded, however, to speak to him once more, and merely repeated my previous question.

While I spoke, there came a marked change over the countenance of the sleep-waker. The eyes rolled themselves slowly open, the pupils disappearing upwardly; the skin generally assumed a cadaverous hue, resembling not so much parchment as white paper; and the circular hectic spots which, hitherto, had been strongly defined in the centre of each cheek, went out at once. I use this expression, because the suddenness of their departure put me in mind of nothing so much as the extinguishment of a candle by a puff of the breath. The upper lip, at the same time, writhed itself away from the teeth, which it had previously covered completely; while the lower jaw fell with an audible jerk, leaving the mouth widely extended, and disclosing in full view the swollen and blackened tongue. I presume that no member of the party then present had been unaccustomed to death-bed horrors; but so hideous beyond conception was the appearance of M. Valdemar at this moment, that there was a general shrinking back from the region of the bed.

I now feel that I have reached a point of this narrative at which every reader will be startled into positive disbelief. It is my business, however, simply to proceed.

There was no longer the faintest sign of vitality in M. Valdemar ; and concluding him to be dead, we
were consigning him to the charge of the nurses, when a strong vibratory motion was observable in the tongue. This continued for perhaps a minute. At the expiration of this period, there issued from the distended and motionless jaws a voice - such as it wouid be madness in me to attempt describing. There are, indeed, two or three epithets which might be considered as applicable to it in part; I might say, for example, that the sound was harsh, and broken and hollow; but the hideous whole is indescribable, for the simple reason that no similar sounds have ever jarred upon the ear of humanity. There were two particulars, nevertheless, which I thought then, and still think, might fairly be stated as characteristic of the intonation, as well adapted to convey some idea of its unearthly peculiarity. In the first place, the voice seemed to reach our ears - at least mine - from a vast distance, or from some deep cavern within the earth. In the second place, it impressed me (I fear, indeed, that it will be impossible to make myself comprehended) as gelatinous or glutinous matters impress the sense of touch.

I have spoken both of "sound" and of "voice." I mean to say that the sound was one of distinct - of even wonderfully, thrillingly distinct - syllabification. M. Valdemar spoke - obviously in reply to the question I had propounded to him a few minutes before. I had asked him, it will be remembered, if he still slept. He now said:
"Yes;-no;-I have been sleeping - and nownow - I am dead."
No person present even affected to deny, or attempted to repress, the unutterable, shuddering horror which these few words, thus uttered, were so well calcu-
lated to convey. Mr. L--l (the student) swooned. The nurses immediately left the chamber, and could not be induced to return. My own impressions I would not pretend to render intelligible to the reader. For nearly an hour we busied ourselves, silently without the utterance of a word - in endeavors to revive Mr. L-l. When he came to himself, we addressed ourselves again to an investigation of M . Valdemar's condition.

It remained in all respects as I have last described it, with the exception that the mirror no longer afforded evidence of respiration. An attempt to draw blood from the arm failed. I should mention, too, that this limb was no farther subject to my will. I endeavored in vain to make it follow the direction of my hand. The only real indication, indeed, of the mesmeric influence, was now found in the vibratory movement of the tongue, whenever I addressed M . Valdemar a question. He seemed to be making an effort to reply, but had no longer sufficient volition. To queries put to him by any other person than myself he seemed utterly insensible, although I endeavored to place each member of the company in mesmeric rapport with him. I believe that I have now related all that is necessary to an understanding of the sleep-waker's state at this epoch. Other nurses were procured; and at ten o'clock I left the house in company with the two physicians and Mr. L-l.

In the afternoon we all called again to see the patient. His condition remained precisely the same. We had now some discussion as to the propriety and feasibility of awakening him; but we had little difficulty in agreeing that no good purpose would be served by so doing. It was evident that, so far,
death (or what is usually termed death) had been arrested by the mesmeric process. It seemed clear to us all that to awaken M. Valdemar would be merely to insure his instant, or at least his speedy, dissolution.

From this period until the close of last week - an interval of nearly seven months - we continued to make daily calls at M. Valdemar's house, accompanied, now and then, by medical and other friends. All this time the sleep-waker remained exactly as I have last described him. The nurses' attentions were continual.

It was on Friday last that we finally resolved to make the experiment of awakening, or attempting to awaken him; and it is the (perhaps) unfortunate result of this latier experiment which has given rise to so much discussion in private circles - to so much of what I cannot help thinking unwarranted popular feeling.

For the purpose of relieving M. Valdemar from the mesmeric trance I made use of the customary passes. These, for a time, were unsuccessful. The first indication of revival was afforded by a partial descent of the iris. It was observed, as especially remarkable, that this lowering of the pupil was accompanied by the profuse outflowing of a yellowish ichor (from beneath the lids) of a pungent and highly offensive odor.

It was now suggested that I should attempt to influence the patient's arm, as heretofore. I made the attempt and failed. Dr. F- then intimated a desire to have me put a question. I did so, as follows:
"M. Valdemar, can you explain to us what are your feelings or wishes now?"

There was an instant return of the hectic circles on the cheeks; the tongue quivered, or rather rolled violently in the mouth (although the jaws and lips remained rigid as before); and at length the same hideous voice, which I have already described, broke forth :
"For God's sake!-quick!-quick!-put me to sleep - or, quick! - waken me! - quick! - I say to you that I am dead!"

I was thoroughly unnerved, and for an instant remained undecided what to do. At first I made an endeavor to recompose the patient; but, failing in this through total abeyance of the will, I retraced my steps and as earnestly struggled to awaken him. In this attempt I soon saw that I should be successful or at least I soon fancied that my success would be complete - and I am sure that all in the room were prepared to see the patient awaken.

For what really occurred, however, it is quite impossible that any human being could have been prepared.

As I rapidly made the mesmeric passes, amid ejaculations of "dead! dead!" absolutely bursting from the tongue and not from the lips of the sufferer, his whole frame at once - within the space of a single minute, or even less, shrunk - crumbled - absolutely rotted away beneath my hands. Upon the bed, before that whole company, there lay a nearly liquid mass of loathsome - of detestable putridity.

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[^0]:    vol. II. - 5 65

[^1]:    1 Moraux is here derived from mœurs, and its meaning is " fashionable," or, more strictly, " of manners."

[^2]:    1 Speaking of the tides, Pomponius Mela, in his treatise De Sit $\hat{\imath}$ Orbis, says, "Either the world is a great animal, or," \&c.

[^3]:    1 Balzac - in substance. I do not remember the words. 87

[^4]:    1 "Florem putares nare per liquidum athera."- P. Commire.

[^5]:    1 The zodiacal light is probably what the ancients called Trabes. "Emicant et trabes quas Docos vocant." - Pliny, lib. ii. 26 .

[^6]:    ${ }^{1}$ Since the original publication of Hans Pfaall, I find that Mr. Green, of Nassau-balloon notoriety, and other late aeronants, deny the assertions of Humboldt, in this respect, and speak of a decreasing inconvenience, - precisely in accordance with the theory here urged.

[^7]:    VOL. II. - II
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[^8]:    1 Mr . Ainsworth has not attempted to account for this phenomenon, which, however, is quite susceptible of explanation. A line dropped from an elevation of 25,000 feet, perpendicularly to the surface of the earth (or sea), would form the perpendicular of a right-angled triangle, of which the base would extend from the right angle to the horizon, and the hypothenuse from the horizon to the balloon. But the 25,000 feet of altitude is little or nothing, in comparison with the extent of the prospect. In other words, the base and hypothenuse of the supposed triangle would be so long, when compared with the perpendicular, that the two former may be regarded as nearly parallel. In this manner the horizon of the aeronaut would appear to be on a level with the car. But, as the point immediately beneath him seems, and is, at a great distance below him, it seems, of course, also, at a great distance below the horizon. Hence the impression of concavity, and this impression must remain, until the elevation shall bear so great a proportion to the extent of prospect, that the apparent parallelism of the base and hypothenuse disappears - when the earth's real convexity must become apparent.

[^9]:    1 See Archimedes, De iis Quac in Humido Vehuntur, lib. ii.

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    \text { VOL. II. - } 17 \quad 257
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[^10]:    1 The Corallites.

[^11]:    ${ }^{1}$ The region of the Niger. See "Simmonds's Colonial Magazine."

    2 The Myrmeleon - lion-ant. The term " monster" is equally applicable to small abnormal things and to great, while such epithets as "vast" are merely comparative. The cavern of the myrmeleon is vast in comparison with the hole of the common red ant. A grain of silex is, also, a "rock."

    3 The Epidendrum, Flos Aeris, of the family of the Orchidea, grows with merely the surface of its roots attached to a tree or other object, from which it derives no nutriment - subsisting altogether upon air.

[^12]:    1 "The earth is upheld by a cow of a blue color, having horns four hundred in number." - Sale's Koran.

    2 "The Entozoa, or intestinal worms, have repeatedly been observed in the muscles, and in the cerebral substance of men." See Wyatt's Physiology, p. 143.

[^13]:    1 Babbage's Calculating Machine.
    ${ }^{2}$ Chabert, and since him, a hundred others.
    3 The Electrotype.
    4 Wollaston made of platinum for the field of views in a telescope a wire one eighteen-thousandth part of an inch in thickness. It could be seen only by means of the microscope.

[^14]:    1 Newton demonstrated that the retina, beneath the influence of the violet ray of the spectrum, vibrated $900,000,000$ of times in a second.

    2 The Voltaic pile.
    3 The Electro-Telegraph transmits intelligence instantaneously - at least so far as regards any distance upon the earth.

    4 Electro-Telegraph Printing Apparatus.
    5 Common experiments in Natural Philosophy. If two red rays from two luminous points be admitted into a dark chamber so as to fall on a white surface, and differ in their length by 0.0000258 of an inch, their intensity is doubled. So also if the difference in length be any whole-number multiple of that fraction. A multiple by $2 \frac{1}{4}, 3 \frac{1}{4}$, \&c., gives an intensity equal to one ray only; but a multiple by $2 \frac{1}{2}, 3 \frac{1}{2}, \& c$., gives the result of total darkness. In violet rays similar effects arise when the difference in length is 0.000157

